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Evaluation of the Buddy Team Assignment Program

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14. ABSTRACT (<i>Maximum 200 words</i>): All Infantry soldiers are assigned a battle buddy during One Station Unit Training (OSUT). In 2000, a pilot program was initiated in which some buddy pairs were also assigned together to their first operational units. The hope was that a familiar face would lessen the stress associated with making this transition, and thereby lower attrition rates. During the pilot period, soldiers with Military Occupational Specialty 11M (Fighting Vehicle Infantryman) were either assigned to the Buddy Team Assignment Program (BTAP) or designated as controls for research purposes. Over a 3-month period, soldiers at Fort Benning, GA were surveyed just before graduating from OSUT and asked a variety of questions about their experience, particularly focusing on their battle buddies. Parallel surveys were administered to BTAP and control soldiers in the field. Results showed that battle buddies had a highly positive impact during OSUT and were generally well liked. This impact was reduced once soldiers were in the field, although there was still greater evidence of a positive than a negative impact. The results suggest that the degree to which soldiers like one another and the level at which they are assigned together (e.g., squad, platoon) have a major impact on program outcomes.					
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FOREWORD

In the year 2000, the Chief of Infantry initiated the Buddy Team Assignment Program (BTAP) in which soldiers who had been assigned as battle buddies during One Station Unit Training would also be assigned together to their first operational unit. The hope was that the BTAP would lessen some of the strain that is placed on young soldiers during this period and thereby lessen attrition rates. The U.S. Army Research Institute for the Behavioral and Social Sciences was engaged to perform an evaluation of this program to ascertain whether it was having the intended effects and whether there were potential improvements that could maximize such effects.

This report describes the evaluation. This involved developing three different forms of a survey which was then administered to (a) soldiers about to graduate from training, (b) soldiers in the field who were assigned to the program, and (c) soldiers in the field who had been designated as “controls” for evaluation purposes. The results of the surveys are presented in detail along with several recommendations in the form of suggested BTAP guidelines. This information has been provided via an information paper to the Deputy Chief of Staff (G-1) and through reports and a video teleconference to the U.S. Total Army Personnel Command and the Initial Training Brigade at Fort Benning.

STEPHEN L. GOLDBERG
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EVALUATION OF THE BUDDY TEAM ASSIGNMENT PROGRAM

EXECUTIVE SUMMARY

Requirement:

In FY 2000, the Chief of Infantry initiated a pilot program in which some soldiers who were assigned as battle buddies during One Station Unit Training (OSUT) would also be assigned together to their first operational unit. This initiative was named the Buddy Team Assignment Program (BTAP). It was hoped the presence of a familiar and trusted face during this critical transition period would assist these soldiers in making the adjustment and thereby decrease the incidence of attrition. During the pilot phase, the program was only open to soldiers in the 11M (Fighting Vehicle Infantryman) MOS. In addition, while some soldiers were assigned to BTAP, another group was designated to be part of the control group for evaluation purposes. Soldiers in the control group were assigned Battle Buddies during OSUT, but these Battle Buddies were not assigned to the same first operational unit. This research was undertaken to determine how well the program was operating, whether it was having its intended effects, and what steps, if any, might be taken to improve its operations and outcomes.

Procedures:

The first step in conducting the BTAP evaluation was to develop a model that highlighted the major influences on the stay/leave decision. Based on this model, a survey was created that assessed its elements, including: (a) key personality variables, (b) background and potential situational influences, (c) self assessments of characteristics related to success in the Army, (d) buddy interactions, (e) buddy assessments, (f) unit factors, and (g) perceptions of leadership. In addition, several outcome measures were included such as morale, career intentions, and stress levels. The survey instrument was then altered to fit three respondent groups: (a) soldiers on the verge of completing OSUT, (b) BTAP soldiers in their units, and (c) control soldiers in their units. The most notable variations across instruments included asking questions specific to BTAP (e.g., at what unit level were you and your buddy assigned), and modifying questions to fit the control group (e.g., asking for evaluations of one's closest friend in the unit rather than an assigned buddy).

End-of-training surveys were administered to each 11M OSUT class in the April-July 2001 timeframe. Rosters provided by the U.S. Total Army Personnel Command (PERSCOM) were used to identify BTAP and control soldier units/locations. Surveys were then distributed to points of contact at each of these locations with instructions for their administration and return. In addition, Social Security Numbers (requested on the survey) were used to match records to the Enlisted Master File to determine attrition status as of December 2001.

Findings:

Training Survey. The training survey results indicated generally positive effects from the battle buddy system. These included the following:

- 85% of respondents said they were at least somewhat responsible for their battle buddy's success.
- 94% of respondents said they helped their battle buddy somewhat or a great deal.
- Over half of the respondents indicated that their battle buddy had a positive effect on them in terms of each of 14 factors included in the survey (e.g., confidence, morale, commitment).
- There was a positive, significant relationship between liking one's battle buddy and self-rated morale.

The fact that less than half of the respondents (46%) had only one battle buddy during OSUT suggests that positive outcomes may be realized by seeking ways to stabilize the buddy teams. This recommendation is predicated on the notion that the longer such teams have to work together, the greater the level of trust and reliance they will develop. In addition, clear effects were found based on whether soldiers liked their battle buddies. These included higher ratings of their buddies and more positive assessments of the impact their buddy had.

Unit Survey. There was evidence of some confusion on the part of BTAP soldiers regarding their inclusion in the program. Of the 60 buddy pairs that were identified through the analysis of U.S. Army personnel records, in only 25 cases did both soldiers say that they were assigned to their unit with their buddy. In all other pairs, one or both soldiers indicated that they were not. In addition, more than half of the soldiers indicated that they and their buddy were assigned at the company level or above when they arrived at their unit. There was also clear evidence that assignment level affected level of interaction, which in turn affected level of influence.

The data indicate that buddies had much less influence in the unit than in training. For instance, 85% of OSUT respondents said they were somewhat or very responsible for their battle buddy's success, as compared to 52% of soldiers in the field. Such outcomes may be due to a variety of causes, including the fact that a large percentage of buddies were assigned in such a way as to constrain the amount of possible interaction. However, across dimensions, an average of 35% of BTAP soldiers said their buddy had a positive or very positive effect on them, while very small proportions (2-10%) indicated that their buddy had a negative impact.

Utilization of Findings:

Two primary recommendations surface from these findings. First, the degree to which battle buddies liked one another was positively related to a variety of factors (e.g., amount of interaction, assessment of buddy, assessment of buddy influence). Fortunately, a very high percentage of soldiers (81%) said they liked their buddy. Still, given the importance of this factor, it seems warranted to continue investigating ways to maximize the likelihood that battle buddies will get along. This could include administering surveys at the start of training that seek information that could be used to form buddy teams (e.g., interests, background). Even should this be done, however, it is unlikely that all teams will get along. Fortunately, survey results from soldiers in the field did not suggest that buddies who failed to get along had a negative impact when assigned together. Rather, it appears that they simply chose not to interact, thereby voiding any potential positive outcomes. But in general, it may be wise to not assign soldiers together in cases where there is evident dislike between them.

Another element that is important to the success of the program is to ensure that it functions in the way intended. This includes informing soldiers they are being assigned together and taking steps to make sure they are placed at the smallest unit level possible. There was apparent confusion on the first issue among the unit survey respondents. The evidence regarding level of assignment indicated that interaction and positive outcomes are associated with soldiers being placed in the same squad or platoon. Steps have already been initiated to correct such problems, including developing software for assigning and tracking buddy teams.

EVALUATION OF THE BUDDY TEAM ASSIGNMENT PROGRAM

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EVALUATION OF THE BUDDY TEAM ASSIGNMENT PROGRAM

BACKGROUND

Attrition is an ongoing problem confronted by the U.S. Army as well as the other branches of the Armed Forces. Approximately one-third of each cohort entering the military fails to complete a three-year term of service. Most of this attrition (75-80%) is the result of a failure to meet the minimum behavioral or performance criteria (Laurence, Naughton, & Harris, 1995). The cost to the Army is significant. For instance, the General Accounting Office estimates that the cost of replacing a fully-trained servicemember is approximately \$38,000 (U.S. General Accounting Office, 2001). In addition, there is the less tangible price the Army pays in the form of such factors as personnel disruption and damage to unit cohesion.

The primary focus of much of the research done to understand the phenomenon of attrition has been on identifying background and/or personal characteristics that are associated with individuals who fail to complete their terms of service. Thus, over the years it has been repeatedly demonstrated that high school graduates are less likely to leave service prematurely than are non-graduates. Similarly, it has been shown time and again that those who score lower on the Armed Services Vocational Aptitude Battery (ASVAB), the military entrance test, are more likely to attrit than their higher scoring counterparts. Other factors that have been shown to be associated with military attrition include pre-service moral offenses (e.g., arrests) and gender (with women more likely to attrit).

One method by which attrition could possibly be reduced is to provide greater support as new recruits seek to make the transition from citizen to soldier. This was one of the factors that led the U. S. Army Training and Doctrine Command (TRADOC) to mandate that all recruits in basic and advanced initial training be paired in teams of "battle buddies." TRADOC feels that this practice has the following benefits:

- Provides soldiers with sources of mutual support and assistance,
- Assists in the development of teamwork,
- Develops a sense of responsibility and accountability among soldiers,
- Improves safety during training, and
- Reduces the likelihood and opportunity for misconduct, sexual harassment, and suicide attempts/gestures.

The strains that may result in soldiers leaving the Army prematurely do not end after training is complete. In fact, making the transition to the first operational unit can be a particularly stressful time as individuals are sent to new locations where they must integrate with existing units and perform their expected job duties. Thus, the concept behind the Buddy Team Assignment Program (BTAP) is to assign training battle buddies together to their first unit, thereby providing a familiar face to serve as a source of continuing support and assistance.

BTAP was initiated by the Chief of Infantry in coordination with the U.S. Army Personnel Command (PERSCOM). The aim of the program was to reduce attrition by having soldiers serve with someone they already know in the hope that “the fear of the unknown and the initial trials that test young infantrymen [will] fall into perspective when a trusted buddy is on the flank” (Office of Infantry Proponency, 2001). BTAP began in the third quarter of FY 2000 as a pilot program for soldiers in a single Military Occupational Specialty (11M, Fighting Vehicle Infantryman). Training unit 1st Sergeants were instructed to designate BTAP teams by the end of the third week of One Station Unit Training (OSUT). This was largely done on a convenience basis, as the soldiers so designated had to be free from administrative constraints that would prevent their being assigned together (e.g., additional training commitments). To support the evaluation of the program, some portion of those soldiers not designated for BTAP were assigned to a control group. In addition, instructions were given to the training company 1SG that no information be given about the joint assignments until the end of the training period. Thus, all soldiers received the same treatment and had similar expectations throughout OSUT.

Upon graduation, BTAP soldiers were assigned with their battle buddies to their first unit, with the guidance that they be placed together at the lowest level possible (e.g., squad), and that they be allowed to continue to serve together for a minimum of six months. In September of 2001, a consolidation of Military Occupational Specialties (MOS) occurred in which the Fighting Vehicle Infantryman (11M) and Heavy Antiarmor Weapons Infantryman (11H) became Infantryman (11B). At this time, the trial implementation of BTAP was expanded to include all 11Bs. Software was put into place to track buddy teams over time, and research was undertaken to investigate the possibility of assessing personal characteristics (e.g., need for affiliation) and using this information to guide the formation of buddy teams.

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) was asked to evaluate BTAP. As described below, this was done by collecting data from soldiers at the end of training as well as soldiers who had already been assigned to their operational units. These data were then supplemented by information extracted from administrative records to isolate any effects of BTAP on attrition. This report describes the methodology by which this evaluation was carried out, as well as the results and their implications.

METHODOLOGY

Overview

Obtaining soldier input on BTAP was deemed critical to this evaluation. ARI made the decision to survey soldiers, both BTAP participants and controls, at two separate times: immediately prior to their leaving training (training survey) and following their arrival at their operational units (unit survey). In the first instance, information was gathered about soldier experiences with their battle buddies during OSUT. The unit survey was intended to provide data on the experiences of both BTAP soldiers and controls in regard to their adaptation to the Army and the extent to which they relied on their buddies (or friends) in

making the transition from training. Both the training and unit surveys also solicited opinions about the idea of assigning battle buddies together to their first units.

Ideally, the training and unit surveys would have been administered to the same soldiers so that changes in their attitudes over time could be monitored. This would provide the advantage of telling us if “real life” experience had an impact on views of BTAP, either positively or negatively. Unfortunately, however, the timeframe for the study would not allow this. Therefore, we collected cross-sectional data from soldiers at the end of training and those already in their units.

Evaluation Measures

To guide the survey design efforts, a model was created that depicted the likely influences on the stay/leave decision (Figure 1). This was loosely adapted from Tinto (1975), who reviewed the college dropout literature. The surveys addressed the elements in the model as follows:

- Family background. Presence of wife/girlfriend, supportiveness of wife/girlfriend and central adult figures (e.g., parents, stepparents) of completing Army service, number of dependents, presence of family/friends in the area where stationed
- Individual attributes. Hardiness, need for affiliation, Armed Forces Qualification Test (AFQT) score, education
- Pre-military experience. Prior familiarity with area where assigned
- Goal commitment. Commitment to completing term
- Institutional commitment. Commitment to unit
- Military performance. Self ratings on 14 dimensions (e.g., confidence, motivation, satisfaction), promotions received, reenlistment eligibility, character of separation (if any)
- Buddy/friend interactions. Ratings of buddy on 14 dimensions, ratings of buddy/friend influence on 14 dimensions, frequency of interaction with buddy/friend, satisfaction with level of interaction, level of liking of buddy/friend
- Interactions with leadership. Ratings of company leadership on seven dimensions (e.g., leaders have high standards, treat soldiers with respect)
- Military integration. Commitment, unit morale, unit cohesion
- Social integration. Degree to which soldier gets along with peers, socialization with fellow soldiers outside of work

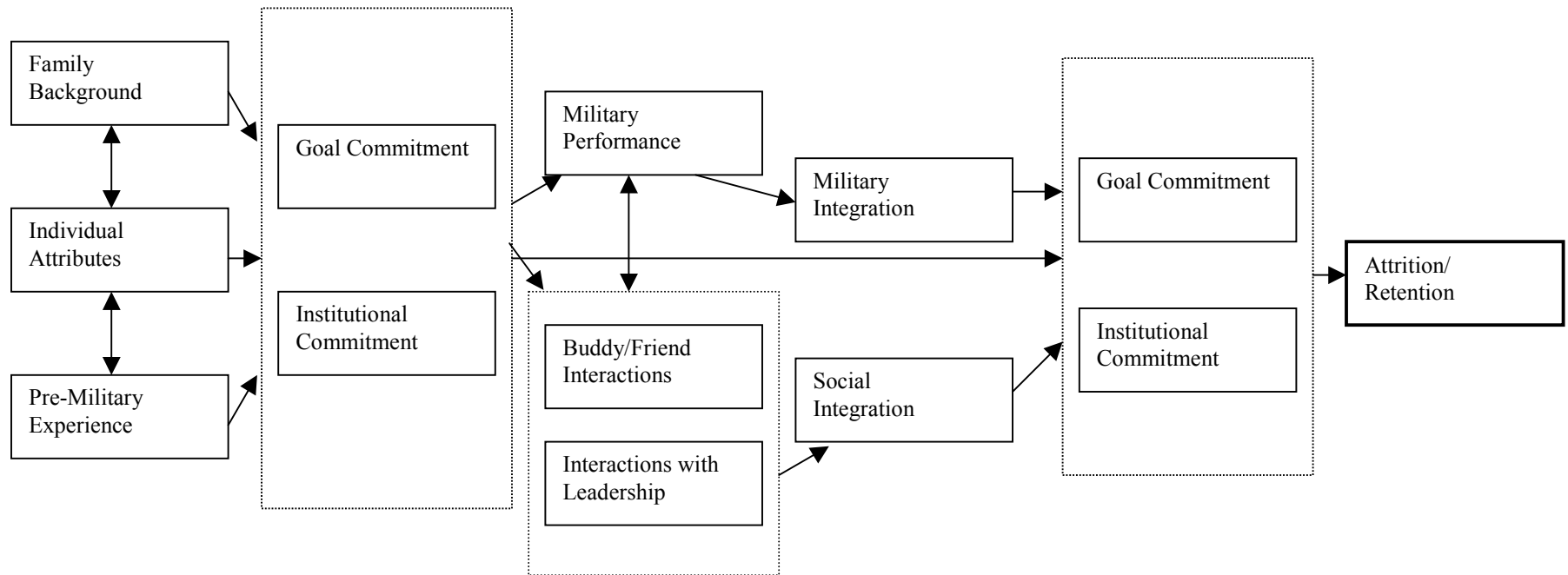


Figure 1. A conceptual model of the stay/leave decision.

With minor exceptions, the three surveys (training, unit-BTAP, unit-control) were identical (see Appendix A). The differences included adding items to the unit-BTAP survey to assess such factors as the level at which the buddies were assigned together, and changing the wording/instructions in the unit-control survey to assess attitudes towards one's best friend in the unit rather than one's buddy. Many of the items were adapted from existing surveys (e.g., the Sample Survey of Military Personnel). This provided some assurance that they had been found to adequately tap the dimensions of interest. Hardiness was measured through a 15-item survey developed by Bartone (1995). The questions cover three dimensions: commitment (e.g., trying your best really pays off in the end), control (e.g., by working hard you can always achieve your goals), and challenge (e.g., I enjoy the challenge when I have to do more than one thing at a time). For the purposes of this research, a mean value was computed to form a hardiness score. Based on Bartone's recommendation, an overall score was used rather than dimension-based subscores. Need for affiliation was measured with a 5-point scale developed by Steers and Braunstein (1976). Here, too, an overall mean score was computed.

Several outcome measures were included in the survey or extracted from military records. These included:

- Current level of morale
- Level of conflict / stress on the job and in personal life
- Career intentions
- Feelings about decision to enlist
- Feelings about buddy program
- Attrition

Survey Administration

Training Survey

The administration of the end-of-training survey was a straightforward process. Arrangements were made with Ft. Benning personnel in charge of training soldiers in the 11M MOS to distribute the surveys within 2 weeks prior to graduation from OSUT. In addition to providing copies of the instrument, the Points Of Contact (POCs) were also given pre-addressed packages for the return of the completed surveys. This was done on a regular basis from April through the beginning of July of 2001. Thus, data were collected from all 11M graduates in the third quarter of FY 2001.

Unit Survey

The Army provided rosters of soldiers designated as BTAP participants or controls over the first several months of the program. These included names, social security numbers (SSNs), and Unit Identification Codes (UICs) for 428 soldiers entered into BTAP and 390 controls. The UICs were used to determine the location of each of the soldiers. ARI personnel contacted the POCs at each of the 22 units where these soldiers were stationed

to notify them of the impending arrival of the surveys and to obtain correct mailing addresses. Survey packages were then assembled, including:

- A cover letter signed by the Chief, Office of Infantry Proponency, explaining the purpose of the surveys and soliciting cooperation in their distribution and return.
- A set of instructions for survey distribution and return.
- A roster of soldiers to be surveyed, including space for POC comments on the distribution process (e.g., why survey was not completed).
- Individual envelopes for each survey respondent. Each of these was labeled with the soldier's name, SSN, and unit designation. Each contained the correct survey for that soldier (i.e., BTAP, Control), as well as another envelope in which the completed survey could be sealed before being returned to the unit POC.
- Prepaid packaging for the bulk return of the completed surveys.

The packages were sent by express delivery in July of 2001. Returns were received over the next four months.

RESULTS

Return Rate

A total of 964 completed training surveys were returned. In regard to the unit survey, 4 of the 22 units receiving surveys failed to return them, for a unit response rate of 82%. Table 1 shows the response rates for BTAP participants and controls.

Table 1
Field Survey Response Rates
BTAP Participants and Controls

	Surveys Sent	Surveys Returned	Response Rate
BTAP Participants	428	214	50%
Controls	390	207	53%

Although the POCs were asked to maintain rosters indicating why surveys were not completed, in most cases this information was either missing or incomplete. As a result, it is impossible for us to know exactly why the response rate was not higher. The most obvious reasons for lack of return, however, are that soldiers were misidentified as being in the unit in question or they left the Army. There appears to be no systematic bias in terms of the *units* who responded (e.g., 5 of the 7 units overseas were included). The most obvious source of bias in terms of individual respondents lies in the fact that early attritees are excluded. We can get some indication of the magnitude of this problem from the information that was provided by the POCs on reasons for nonresponse. This is summarized in Table 2.

Table 2
Administrative Conditions Preventing Data Collection

	Soldier Not in Unit		Soldier Left Unit/Army	
	Number	Percent	Number	Percent
BTAP Participants	54	74%	19	26%
Controls	45	62%	27	37%

What is evident from these figures is that the majority of non-responses were due to the fact that soldiers were either misidentified as being in a given unit or had transferred from that unit or left the Army by the time the surveys were distributed. The fact that there was a slightly higher percentage of departed soldiers in the control group should not be taken as an indication of program effectiveness because the data are incomplete.

In examining the results, we will first focus on the training survey to obtain an indication of the experience these soldiers had with their battle buddies during OSUT. BTAP is founded on the idea that battle buddies bond during training and become “a trusted buddy on the flank,” so the survey was intended to test this assumption. After reviewing the training survey data, we will turn to the field survey to examine the impact of BTAP on soldiers in their operational units.

Training Survey Results

Overview of Buddy Teams

Respondents to the training survey were asked several questions about their battle buddy experience during OSUT. TRADOC has implemented several guidelines for this function, including the stipulation that, should a battle buddy pair be broken up for any reason (e.g., attrition), a new buddy is to be assigned to the soldier(s) involved. To get a measure of the frequency with which this occurs, respondents were asked to indicate the number of battle buddies they had during OSUT. The bulk of soldiers (47%) said they had only one buddy, however, noteworthy percentages indicated that they had two (19%), three (7%), and four or more (21%) battle buddies. The average number of battle buddies assigned during OSUT was 1.9.

Soldiers were also asked how frequently they interacted with their battle buddies and how that amount compared to their interactions with other soldiers in their company. As seen in Figure 2, over three-quarters indicated that they interacted with their buddy several times a day, and about 40% each said that this was (a) comparable to, or (b) more than the time spent with other soldiers.

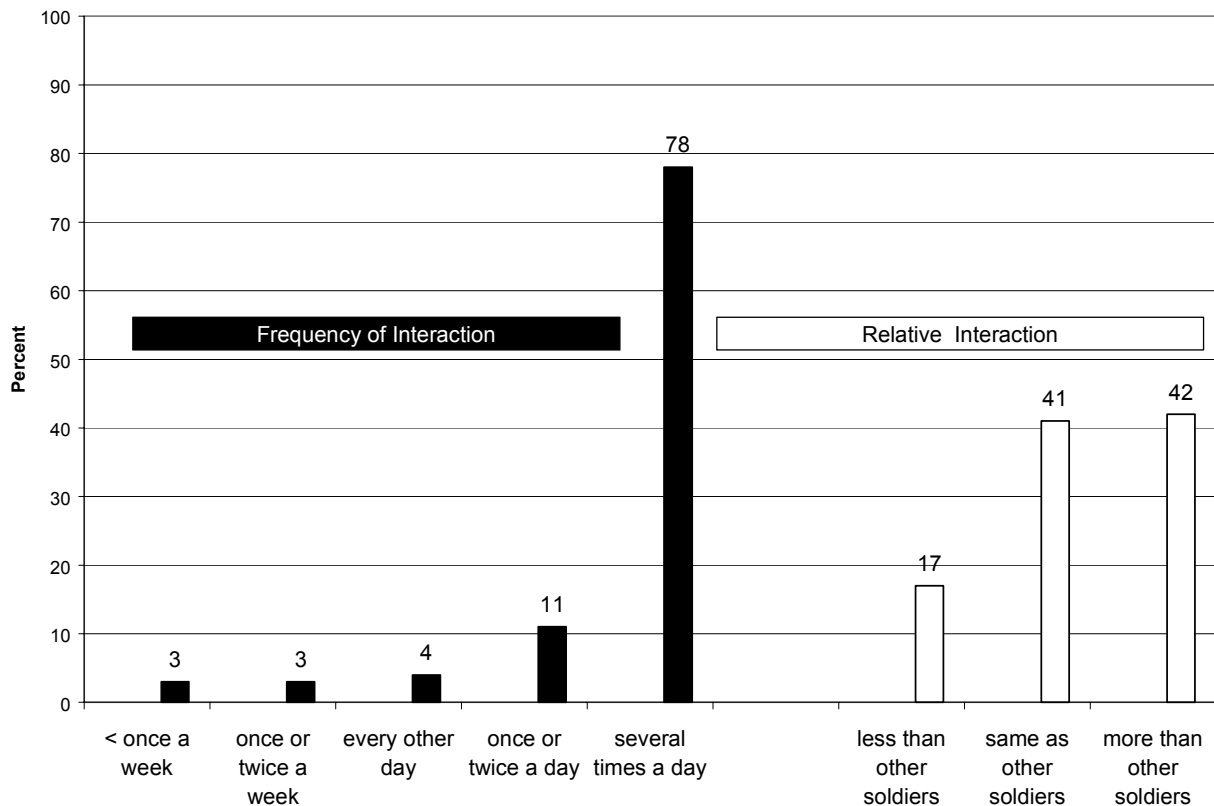


Figure 2. Frequency and relative frequency of interaction with battle buddy.

When asked how satisfied they were with the amount of interaction they had with their battle buddies, only 4% of respondents expressed dissatisfaction, while 20% were neutral in this regard and 76% were satisfied.

Figure 3 shows the degree to which soldiers liked their battle buddies. Over 80% of soldiers reported at least liking their battle buddy, with half saying they liked him very much.

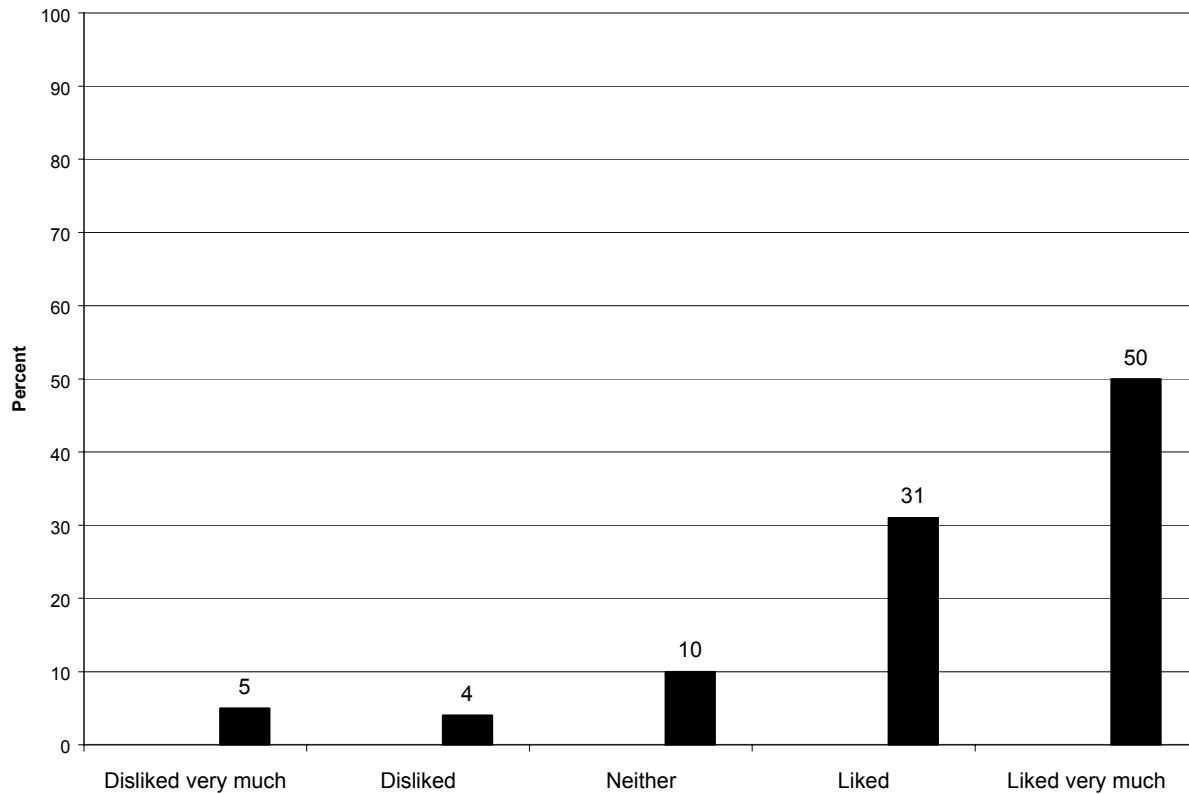


Figure 3. Level of liking for OSUT battle buddy.

Finally, just 35% of the soldiers reported having known that they would be going to their first operational assignment with their battle buddies. The actual percentage of soldiers assigned to BTAP during this period is unknown.

Evaluations of Self and Battle Buddies

Soldiers were asked to rate themselves and their battle buddies on 14 dimensions. The ratings were done on a 5-point scale, where 1 = very low and 5 = very high. As shown in Table 3, average self ratings were all significantly higher than those given to battle buddies, with the differences between means ranging from .2 to .5. Overall, however, the ratings fell around the “high” range, indicating a strong sense of confidence in the abilities of oneself and one’s buddy.

Table 3
Mean Self and Battle Buddy Ratings

Dimension	Self Rating	Battle Buddy Rating
Confidence	4.2	3.9
Motivation	4.2	3.7
Army satisfaction	3.7	3.5
Ability to get along with others	4.0	3.6
Commitment	4.7	4.1
Job performance	4.3	3.8
Ability to balance work/personal lives	4.0	3.6
Ability to adapt to the Army lifestyle	4.2	3.7
Ability to meet physical standards	4.2	3.9
Ability to meet performance standards	4.3	3.8
Ability to meet conduct standards	4.4	3.8
Ability to deal with medical problems	4.2	3.8
Ability to deal with personal problems	4.1	3.8
Ability to adjust to company	4.1	3.8

Note: All mean self and buddy ratings significantly different, $p < .01$.

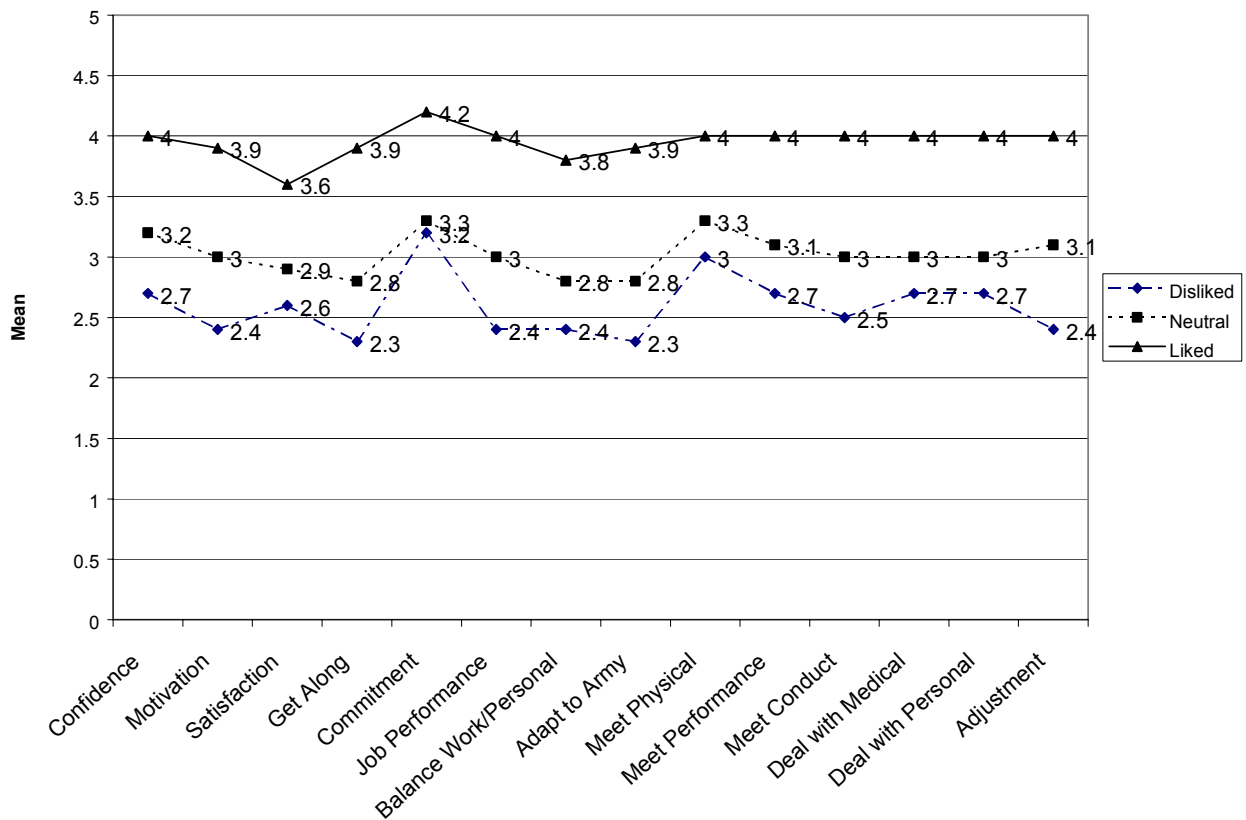


Figure 4. Relationship between liking of battle buddy and ratings.

As seen in Figure 4, there was a clear relationship between the degree to which a battle buddy was liked and the ratings he was given. However, the data do not allow us to determine causality. That is, do soldiers rate buddies they like higher? Or do they have a greater degree of liking for those whom they see as more capable or better adjusted? Perhaps there is some other factor that underlies both their perceptions of their buddy and their liking for him.

Impact on Battle Buddy

Soldiers were asked to indicate (a) the degree to which they felt responsible for their battle buddy's success in training, (b) how much they think they helped their battle buddy, and (c) the amount of time they spent helping him. As seen in Figure 5, about half of the respondents said they were somewhat responsible for their battle buddy's success and 36% felt very responsible. About half of the respondents felt they helped their buddy somewhat, while 45% said they helped him a great deal. However, the majority of soldiers reported they spent little to no time in this pursuit.

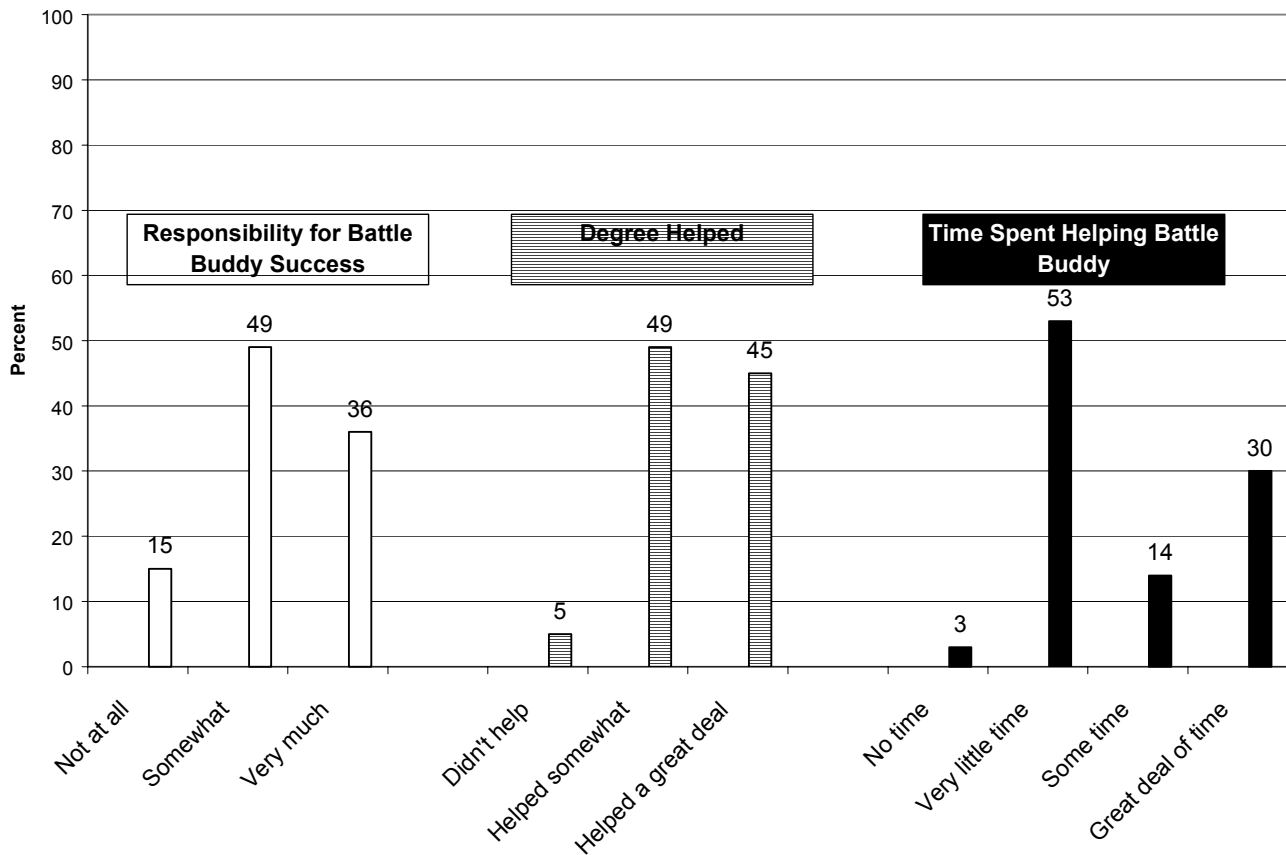


Figure 5. Soldier ratings of impact on battle buddy and time spent helping.

Battle Buddy Impact

Using the same dimensions on which they rated themselves and their battle buddies, soldiers were asked to indicate the impact their buddy had on them (1 = very negative, 5 = very positive). Figure 6 shows that on every dimension, over half of the soldiers replied “positive” or “very positive.” Conversely, the percent of soldiers who indicated that their buddy had a negative or very negative effect was uniformly low, ranging from 4.3% (dealing with medical problems) to 7.8% (satisfaction with the Army). As with the liking-rating relationship demonstrated earlier, soldiers rated the impact their buddy had on them more positively when they liked him. The average influence rating for disliked battle buddies was 2.96, compared to 3.26 among those who gave neutral ratings, and 3.96 by those who liked their battle buddy.

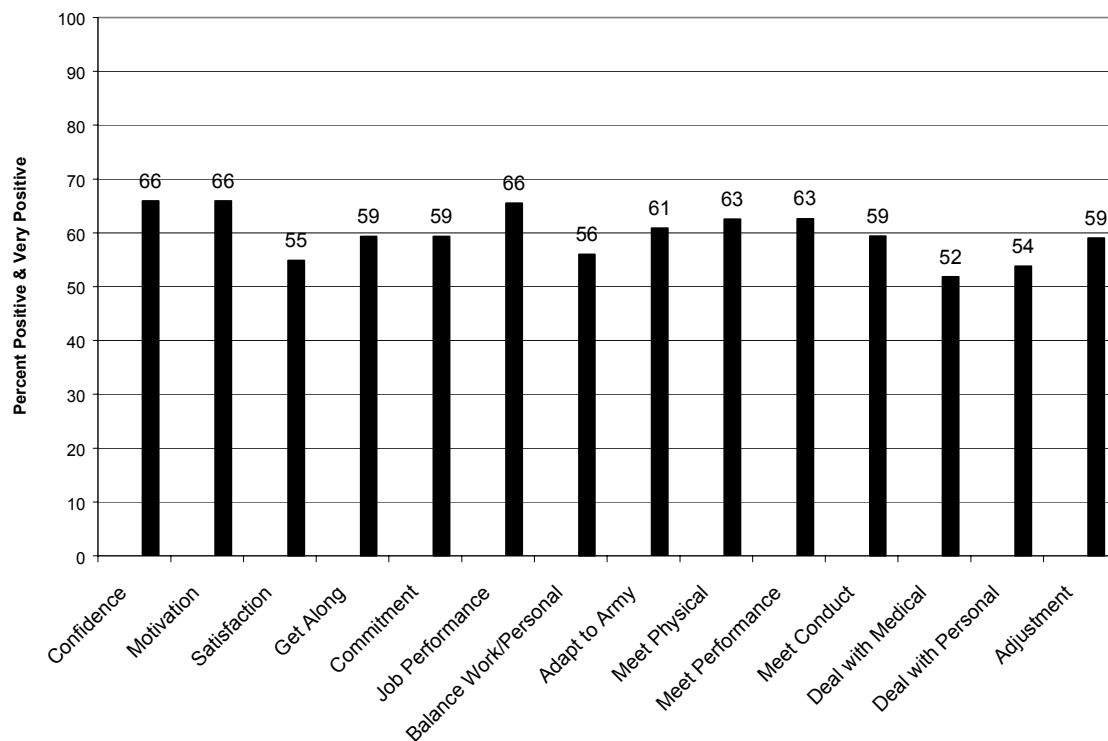


Figure 6. Percent of soldiers indicating battle buddy had a positive or very positive impact.

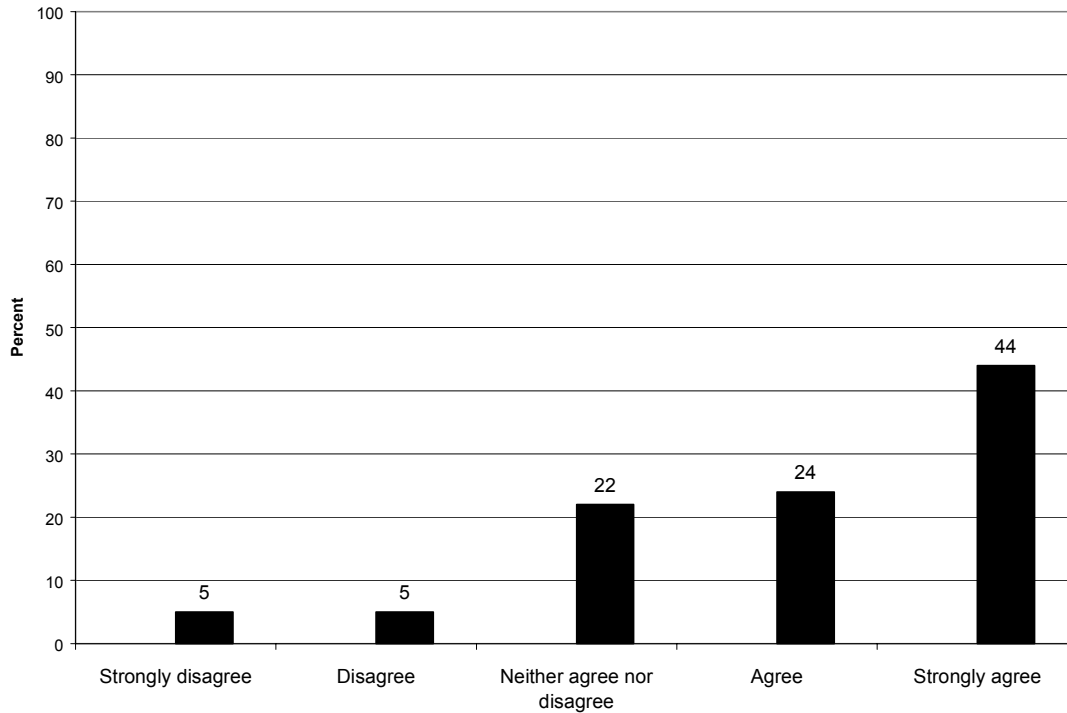


Figure 7. Level of agreement that BTAP is a good Army practice.

Soldiers' Opinions About BTAP

The final question in the training survey asked respondents to indicate their level of agreement with the following statement: Assigning OSUT battle buddies together to the same first duty unit is a good Army practice. As seen in Figure 7, over two-thirds of these soldiers either agreed or strongly agreed with this notion.

About 60% of respondents also offered written explanations for their evaluations of the program. (Complete comments are presented in Appendix B.) Content analysis of these remarks was performed, and the results are shown in Table 4. As is evident from these figures, soldiers with positive views of the program see much the same value in it as was posited by BTAP's creators. That is, they see a benefit in having someone they know and trust with them during the transition to their first duty unit.

I believe it is good for the Army to assign battle buddies from OSUT because that way they at least feel comfortable with one person instead of meeting brand new people all over again.

For one reason why I strongly agree is because we all went through the same training environment together. It's like a brotherhood. We all know our strong points and our weak spots.

The primary concern expressed about the program concerned the possibility of not liking or getting along with one's battle buddy.

It depends on how the battle buddies feel about each other.

Because me and my battle buddy hate each other so that would make my outlook on the military worse.

Table 4
Summary of Written Statements Regarding BTAP

Positive	Frequency	Percent of Comments
Eases transition	237	37
Develop friendship/Motivate one another	185	29
Negative		
Problems with conflicting personalities	54	8
Neutral/Equivocal		
Depends on buddies	51	8
Don't know/care	24	4
Miscellaneous	82	13

Battle Buddies and Outcomes

Because almost all soldiers in OSUT have a battle buddy assigned to them, there is no control group with which we can compare respondents on outcome measures to assess the impact of having a buddy. As a surrogate, we examined the relationship between outcome measures and the degree to which soldiers reported liking their battle buddy. The rationale supporting this approach is that buddies who get along are likely to seek each other out and become more of a functioning team. The data provide some support for this contention. As shown in Figure 8, individuals who liked their buddy reported interacting with him more frequently than did those who were neutral or disliked him ($p < .05$).

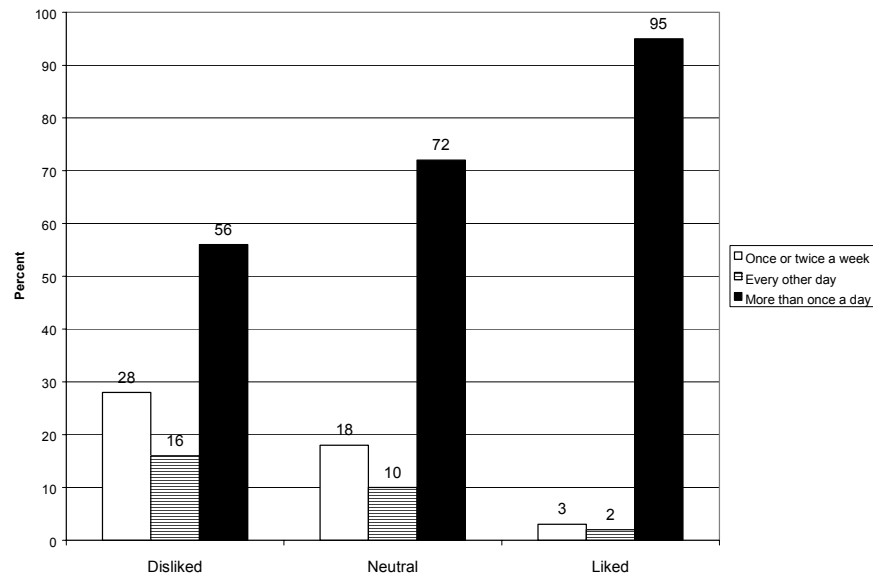


Figure 8. Relationship between liking for battle buddy and amount of interaction.

The variables that were examined in conjunction with degree of liking were:

- Current level of morale
- Conflict/stress on the job
- Conflict/stress in personal life
- Career intentions
- Feelings about decision to enlist in the Army
- Evaluation of BTAP

Two significant relationships were found from these analyses. As illustrated in Figure 9, those soldiers who reported liking their battle buddies were significantly more likely to indicate their morale was high. And, as might be expected, soldiers who felt positively about their battle buddy were also more likely to endorse the notion of assigning buddies together to their first unit (Figure 10).

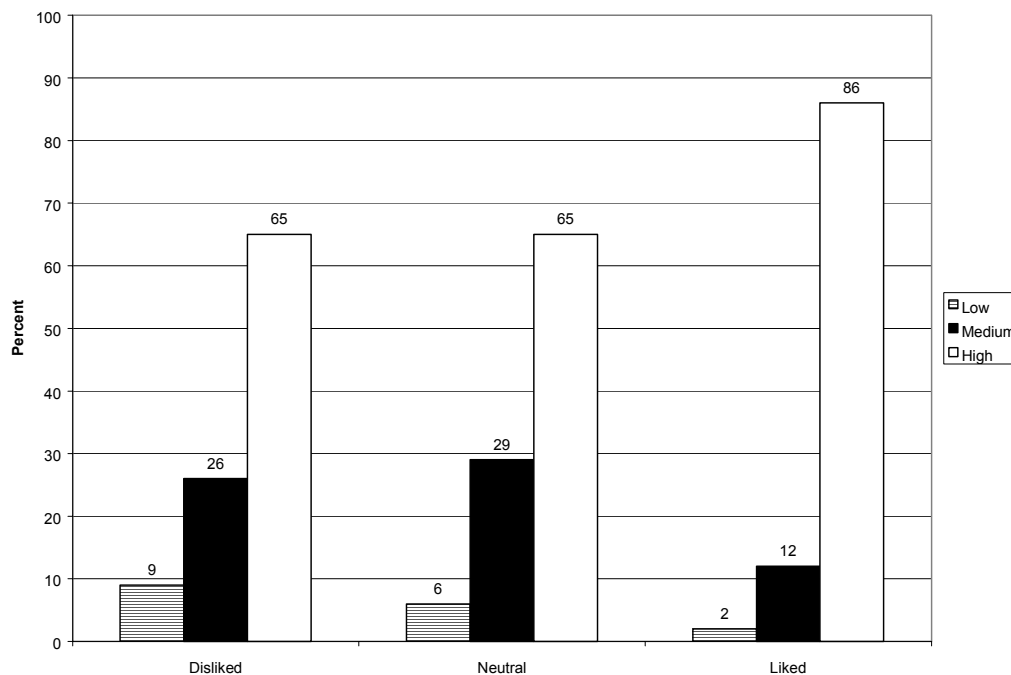


Figure 9. Relationship between liking battle buddy and level of morale.

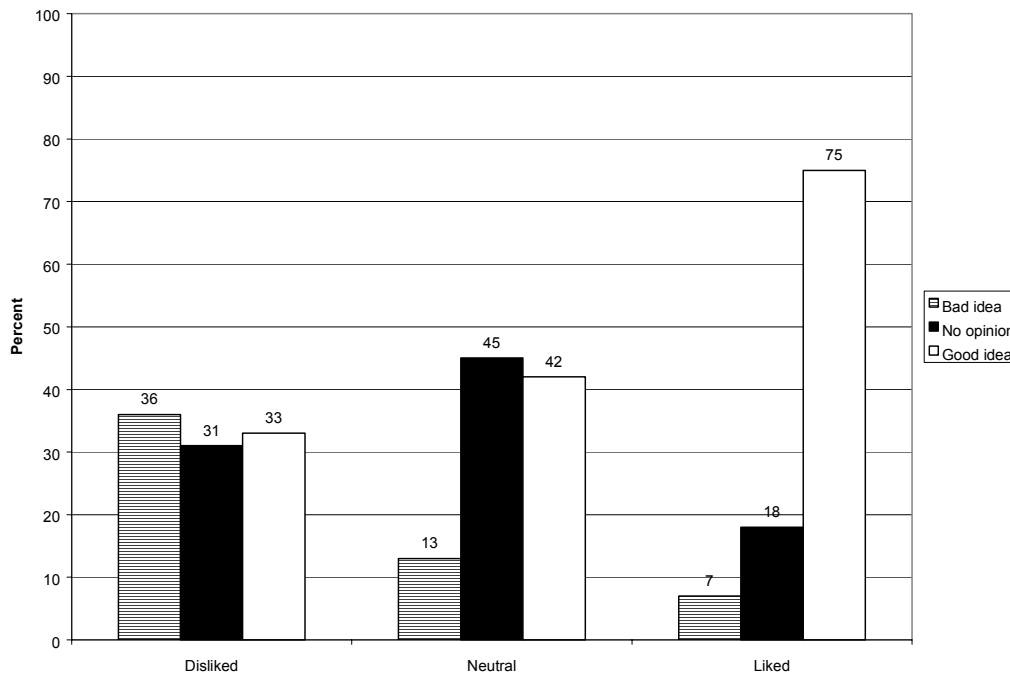


Figure 10. Relationship between liking battle buddy and evaluation of BTAP.

Attrition

When SSNs from the end-of-training survey were matched to the Enlisted Master File, 885 cases were identified. Of these, 53 were found to have a separation code, meaning they left the Army. We examined this information in conjunction with survey item 11: Have you been assigned a battle buddy who will go with you to your first assignment? (We chose this option because of the apparent inaccuracies in the battle buddy designations in the personnel files, as described in greater detail below.) Among the 53 individuals with a separation code, 14 (4.5%) reported earlier that they were being assigned with their buddy, compared to 39 (6.8%) who reported that they were not being assigned with him. This difference is not significant.

Regression Analyses

In an attempt to further specify the relationship between the various background characteristics and attitudes assessed in the surveys with the outcomes, a series of regression analyses were conducted. This technique determines which of a set of variables is most predictive of a given outcome. In each case, the variables were entered as blocks representing the components of the model shown in Figure 1. Item wordings are provided in the appendices in accordance with the listed item numbers.

1. Family background. Marital status, dependents, dating status, supportiveness of spouse/girlfriend of completing term, supportiveness of parent/guardian of completing term

2. Individual attributes. AFQT, highest year of education, hardiness (average of 8f-8t), need for affiliation (average of 8a-8e)
3. Goal commitment. commitment to completing term (9e), attitudes towards not completing term (22l-22m)
4. Institutional commitment. current company has personal meaning (22a), don't feel a sense of belonging to company (22d)
5. Military performance. self ratings (9a-9d, 9f-9n)
6. Buddy interactions. number of buddies (10), weeks served together (12), average/relative interaction (13, 14), satisfaction with interaction (15), liking for buddy (16), ratings of buddy (17a-17n), impact on buddy (18-20), buddy impact (21a-21n)
7. Interactions with leadership. ease of going to leadership, leaders try to keep soldiers, leaders treat soldiers with respect, impressed with leaders, leaders set high standards, leaders interested in personal welfare, leaders force soldiers out (23a—23g)
8. Military integration. can count on soldiers to get job done (22e), company works as a team (22f), when someone fails we all fail (22i), morale is high (22j)
9. Social integration. people care about my well being (22b), soldiers help with personal problems (22c), get along with other soldiers (22g), do things outside work with fellow soldiers (22h)

After the initial regressions were conducted, the variables found not to be related to the outcomes ($p > .01$) were eliminated and the analyses were rerun. These results are summarized in Table 5.

Table 5
Regression Results—End of Training Survey

Outcome Variable = Morale, R-square = .332	
Item	Standardized Beta
Motivation as a soldier	.232
Satisfaction with the Army	.179
Liking for battle buddy	.167
Easy to go to leaders with problems	.156
Confidence as a soldier	.121
No sense of belonging to unit	-.096
Outcome Variable = Job Stress, R-square = .093	
No strong sense of belonging to unit	.197
Self rating, dealing with personal problems	-.175
# of weeks served with battle buddy	.092
Outcome Variable = Personal Stress, R-square = .117	
Self rating, dealing with personal problems	-.312
Hardiness	-.100
Buddy impact—dealing with personal problems	.110
Outcome Variable = Feeling About Decision to Enlist, R-square = .269	
Satisfaction with the Army	.311
Self rating, ability to adjust to the Army	.231
No strong sense of belonging to unit	-.118
Outcome Variable = Career Intent, R-square = .074	
Satisfaction with the Army	.264
Education level	-.085
Outcome Variable = Evaluation of BTAP, R-square = .186	
Liking for Battle Buddy	.354
Do things with soldiers outside of work	.146

Overall, the results suggest that the variables in question do not explain a great deal of the variance in the outcome measures. This is indicated by the R-squares, which show that the models account for a low of about 7% of the variance in career intent to a high of 33% in morale. Most of the relationships found are intuitively logical (e.g., satisfaction with the Army being predictive of morale, feelings about the decision to enlist, and career intent). Battle Buddy factors were found to be predictive in the following cases:

- Soldiers who liked their battle buddy reported higher morale.
- The more weeks a soldier reported serving with his battle buddy, the higher the reported job stress.
- A positive buddy impact in regard to dealing with personal problems was associated with higher levels of personal stress.
- Liking one's battle buddy was associated with a positive evaluation of BTAP.

Some of these relationships are difficult to interpret, particularly that between weeks served with battle buddy and job stress. The association between buddy impact and level

of personal stress may indicate that soldiers who experience such stress depend on their buddies more for help in this regard, and so rate them more highly in terms of their impact.

Unit Survey Results

Identifying Buddy Teams

As mentioned previously, the Army maintained rosters of buddy teams and control group members over the BTAP trial period and provided this information for the purposes of survey distribution. In addition, when the data collection was complete, the information on the rosters allowed us to determine the number of instances in which we obtained input from both members of a team. Of the 421 returned surveys, 214 (51%) were from soldiers who had been classified as BTAP participants, while the remainder (207, or 49%) were controls. However, when asked “Was your battle buddy at the end of OSUT also assigned to this post?” only 60% of the BTAP respondents (128) replied “yes.” The two most likely explanations for this result are that soldiers were either misidentified as being in BTAP, designated for the program but administrative or other constraints prevented them from actually being assigned to the same unit, or were not aware they were in the program.

This situation becomes more complicated when we look at the matched buddy pairs. In all, we were able to identify 60 pairs of soldiers who were designated as buddies. We examined their responses to the question that asked if they had been assigned together and found the following:

- In 25 pairs, both responded yes,
- In 10 pairs, one responded yes and the other no,
- In 23 pairs, both buddies said no, they had not been assigned together, and
- In 2 cases one soldier failed to respond to the question.

The reason(s) for this outcome are unclear. Again, it could be that the soldiers were designated to be assigned together but, for administrative or other reasons, this did not occur. The 10 pairs that responded opposite one another are particularly puzzling; there is no apparent explanation for this outcome.

These results suggest that there were administrative problems in the early stages of BTAP. Growing pains at the outset of any new program are to be expected, and a variety of measures have been put into place to cure such woes since these data were collected. Among these is a computer software program that automates many of the assignment and tracking functions.

For analytical purposes a determination had to be made concerning who should be considered a true BTAP participant. There were several available options, including: (a) using the personnel record designation regardless of what the soldier said, (b) classifying all soldiers who answered “yes” to the question asking if they were assigned with their

buddy as program members, and (c) restricting the BTAP label to those buddy teams that we were able to match and who both indicated that they had been assigned together. In the end, we decided to use both (b) and (c). In each case, when BTAP-Control comparisons were carried out, we compared (b) and (c) to determine if there were significant differences between them. When such differences were found, analyses of the variables in question were conducted twice using both BTAP comparison groups. When there were no differences between the two, we used the self-designated respondents because this is inclusive of the smaller group. Throughout the results, these groups are termed “self-designated BTAP” (soldiers who said they were assigned with their buddy) and “actual pairs” (matched buddy teams who agreed that they were assigned together).

Overview of Buddy Teams

BTAP soldiers responding to the unit survey were also asked how many battle buddies they had during OSUT. The average number was 1.5, with 65% of respondents saying they had only one. On average, these soldiers had served with their buddy for 29 weeks. In cases where there was only a single battle buddy during OSUT, this would include 12 weeks in training.

The directive governing BTAP stipulated that buddy teams be assigned together at the lowest possible level (e.g., squad), and that they should remain together for at least 6 months. As a check to see how well this mandate was met, respondents were asked to indicate the level at which they were assigned with their buddy (a) initially and (b) at the time of the survey. Table 6 displays these results. Although there were no significant differences between the self-designated and actual pair buddies in initial assignment, variations did exist in the level reported at the time of the survey.

Table 6
Initial and Current Level of Buddy Team Assignment

	At Start (n)		Now (n)	
	Self-Designated BTAP	Actual Teams	Self-Designated BTAP	Actual Teams
Squad	22	9	11	7
Platoon	31	11	34	13
Company	25	10	29	12
Battalion	31	14	31	12
Other	16	4	16	4
Buddy gone			5	0

There was a fairly even distribution of responses by both groups in relation to both points in time. This indicates that the goal of facilitating interaction between buddies by assigning them in a way that will ensure close contact was only partially met. Again, this may be a function of difficulties experienced in the initial start-up of the program.

Significant differences were found between self-designated and actual pairs in regard to the amount of interaction they had with their buddies. These are reflected in the results shown in Figure 11.

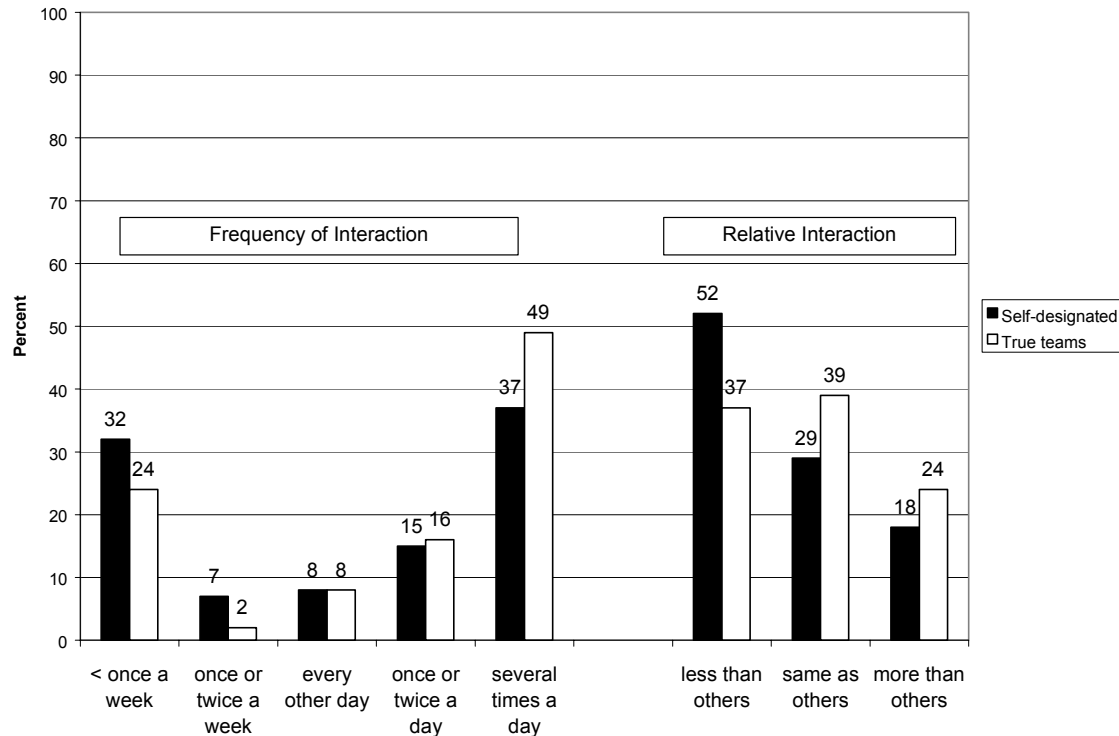


Figure 11. Frequency and relative frequency of interaction with buddy.

For the majority of buddy teams, the level of interaction between the members was quite high, with 52% of the self-designated and 65% of the actual teams indicating that they interacted once or twice a day or more. As might be expected, this result was greatly influenced by the level of assignment of the team members; the Pearson correlation between average interaction and assignment level was $-.67$, indicating that the broader the assignment level (e.g., battalion) the less the amount of interaction. A smaller proportion of respondents indicated that their level of interaction with their buddy was higher than with other soldiers.

Overall, 44% of the self-designated battle buddies indicated that they were satisfied with the level of interaction with their buddies, while 16% were dissatisfied. 40% of the self-designated battle buddies indicated they were neutral regarding their satisfaction with the level of interaction with their buddies. When satisfaction is examined in conjunction with frequency of interaction, it is clear that there is a pronounced positive relationship between the two. As shown in Figure 12, while 68% of soldiers who interacted frequently said they were satisfied, only 14% of those who interacted rarely were satisfied.

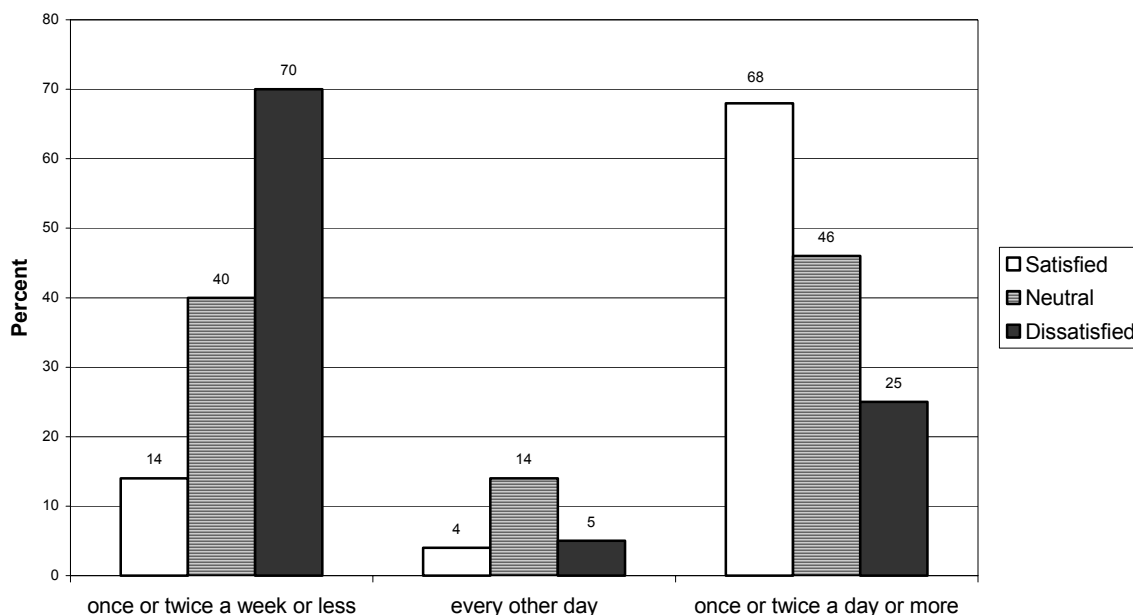


Figure 12. Relationship between amount and satisfaction with buddy interaction.

Given the indication that higher levels of interaction are associated with satisfaction with interaction (or vice versa), it seems probable that these battle buddies must have liked one another to at least some degree. The data bear this out. Nearly three-quarters of the respondents (72%) said they liked their buddy somewhat or very much, while only 14% expressed negative feelings towards him.

Evaluations of Self and Buddy

Soldiers were asked to evaluate themselves and their buddies on 14 dimensions. As shown in Table 7, in all but a few instances, the mean self-rating was higher than the mean buddy rating. The exceptions to this rule were satisfaction with the Army (both self-designated and actual pairs), motivation, and balancing work and personal lives (actual pairs only). The only significant differences were among the self-designated BTAP participants who rated themselves higher than they rated their buddy on the ability to get along, commitment to the Army, ability to meet standards of conduct, deal with medical problems, and deal with personal problems. Overall, the soldiers saw both themselves and their buddies in a positive light, with nearly all of the ratings falling in the moderate-high or high-very high range. The notable exception in this regard is satisfaction with the Army, where all the ratings were in the low-moderate range.

Table 7
Mean Self and Buddy Ratings

Dimension	Self-Designated BTAP Soldiers		Actual Pairs	
	Self	Buddy	Self	Buddy
Confidence	3.97	3.67	4.06	3.74
Motivation	3.53	3.44	3.37	3.43
Army satisfaction	2.62	2.92	2.54	2.98
Ability to get along with others	<i>4.04</i>	<i>3.70</i>	4.11	3.78
Commitment	<i>4.26</i>	<i>3.80</i>	4.13	3.80
Job performance	3.97	3.67	4.02	3.70
Ability to balance work & personal lives	3.42	3.41	3.21	3.53
Ability to adapt to Army	3.68	3.45	3.59	3.57
Ability to meet physical standards	4.12	3.94	4.18	3.96
Ability to meet performance standards	4.01	3.71	3.93	3.73
Ability to meet standards of conduct	<i>4.09</i>	<i>3.66</i>	4.07	3.60
Ability to deal with medical problems	<i>4.01</i>	<i>3.61</i>	4.00	3.66
Ability to deal with personal problems	<i>3.75</i>	<i>3.37</i>	3.66	3.29
Ability to adjust to company	3.77	3.56	3.69	3.55

Note: Italicized means indicate significant difference between self and buddy rating, $p < .01$.

To assess the degree to which buddy team members agreed with the assessments they made of one another, single measure intraclass correlations were computed between self and buddy ratings. For example, a correlation was computed across pairs between how soldiers rated themselves in regard to confidence and how their buddies rated them. These results are shown in Table 8. Half of the 14 correlations were significant ($p < .05$), ranging from .19 (job performance) to .45 (motivation). These are in the low-to-moderate range, a finding that is reflected in the means displayed in Table 7, showing an overall tendency for soldiers to rate themselves somewhat higher than they rate their buddies.

Table 8
Interclass Correlations, Buddy's Rating of Soldier and Soldier Self Rating

Dimension	Single Measure Interclass Correlation
Confidence	.19
Motivation	.45**
Satisfaction with the Army	.36**
Ability to get along with others	.11
Commitment	-.04
Job performance	.19*
Ability to balance work/personal life	.16
Ability to adapt to Army	.30**
Ability to meet physical standards	.17
Ability to meet performance standards	.25**
Ability to meet conduct standards	.31**
Ability to deal with medical problems	-.04
Ability to deal with personal problems	.00
Adjustment to training company	.20*

** $p < .01$

* $p < .05$

Impact on Buddy

Respondents were asked to indicate how much influence they had on their buddies and how much time they spent helping them. No differences were detected between the self-designated BTAP participants and the actual pairs in this regard, so the larger group (self-designated) is used for the analyses. Figure 13 shows that 52% of the BTAP soldiers said they were at least somewhat responsible for their success, and 71% helped their buddy at least somewhat. These figures are considerably lower than were found in the training survey (85% and 94%, respectively), which may reflect a relative lack of need for help. That is, by the time soldiers graduate from training, they were well inculcated in Army ways, and therefore were in less need of assistance in adjusting. Another factor that could have played a role in these differences is the amount of interaction between the soldiers. As seen earlier, 78% of soldiers in OSUT reported interacting with their battle buddy several times a day (Figure 2), while less than half of soldiers in units reported this level (Figure 11). The opportunity to have an influence is very likely to be affected by this fact.

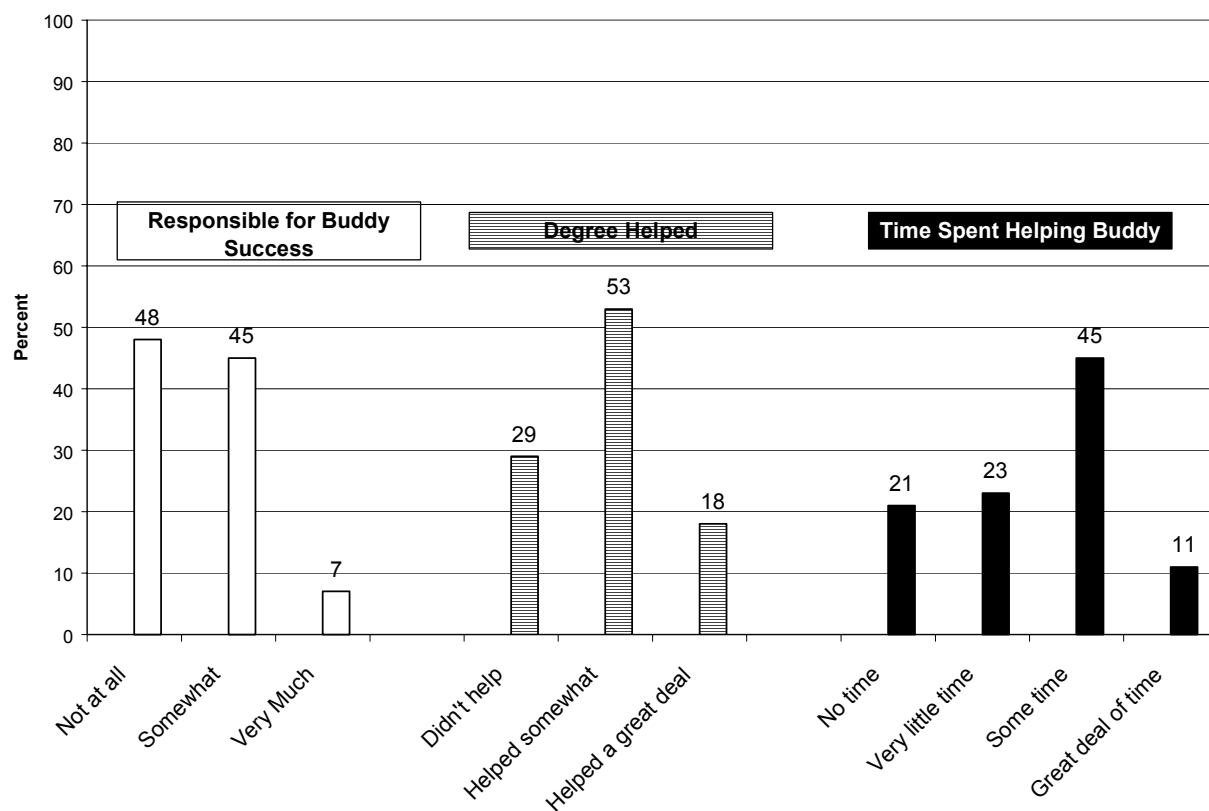


Figure 13. BTAP soldier ratings of impact on buddy and time spent helping.

Buddy Impact

A similar decrease in influence is seen when respondents were asked to rate the impact their buddy had on them in regard to each of 14 domains (1 = very negative, 5 = very positive). At the end of OSUT, more than half of the soldiers said their buddy had a positive or very positive impact in every realm. Unit survey results reveal only one instance in which half the respondents replied in this manner (confidence, see Figure 14). In the remaining instances, the percent positive or very positive ranged from 26-44%. It is worth noting that these are considerably higher than the percent indicating a negative impact, which ranged from 2% (meeting physical standards) to 10% (satisfaction with the Army).

All in all, these results suggest that buddies in the field do not have the same impact as in training. However, substantial numbers of BTAP participants indicated that they were of help to their buddies and that their buddies had a positive impact on them in a variety of ways.

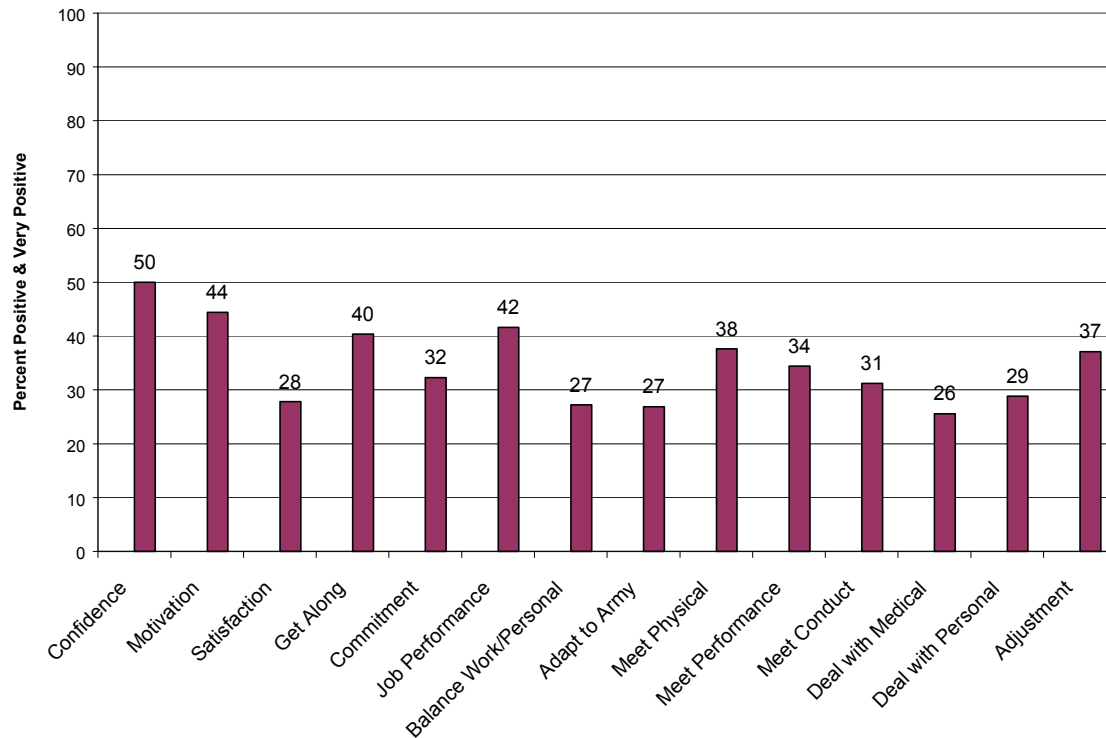


Figure 14. Percent of BTAP soldiers indicating buddy had a positive or very positive impact.

Comparison of Buddies and Friends

As was mentioned earlier, during the first few months of BTAP, a portion of soldiers in OSUT who were not selected to participate in the program were designated as control group members. This allowed for the possibility of comparing the experiences of the two groups to determine what impact, if any, the program had on such factors as morale, career intentions, and attrition. The survey developed for the control soldiers was parallel in almost every respect with that given to BTAP participants. However, control group members were asked to respond to the series of buddy-related questions in terms of “the soldier who has been your closest friend...since you have been assigned to your current post.” It was thought that this would provide a comparison point to evaluate the impact of buddies relative to naturally-forming friends. This was predicated on the notion that soldiers in buddy teams, who have gone through at least some portion of OSUT together and now are jointly assigned to their first units, will develop a bond like that of friends. In the discussion that follows, we focus on those variables for which significant differences were found between the self-identified BTAP soldiers and the controls.

As cited previously, the amount of interaction between buddy team members was influenced by the level of assignment, which ranged from squad to battalion. Further, it seems likely that soldiers would establish friendships with those with whom they interact on a regular basis. Thus, we would expect the level of interaction between friend pairs to be higher than buddy pairs. This is borne out by the data (see Figure 15). Similarly,

because buddies were assigned to soldiers and closest friends were selected by them, we would expect a higher degree of liking among the latter. This was also borne out, although the overwhelming majority of both BTAP soldiers and controls indicated that they liked their buddy/friend.

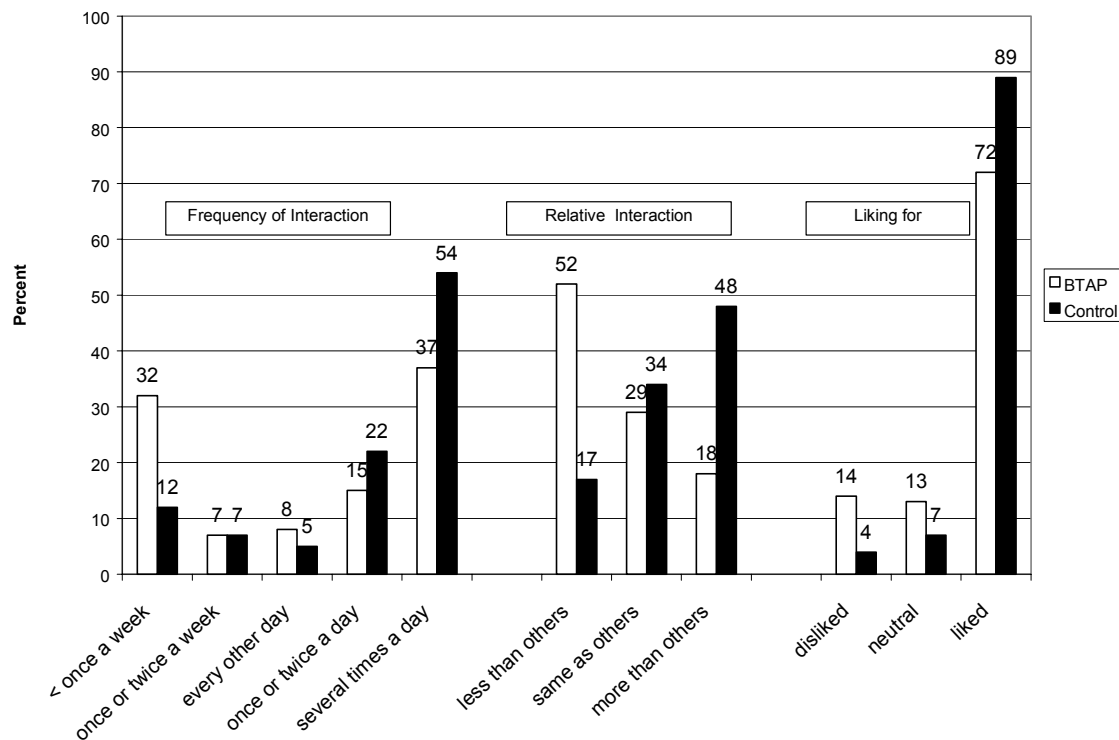


Figure 15. Level of interaction with and liking for buddy (BTAP) and closest friend (control).

As shown in Figure 16, control group soldiers were more likely to take at least some credit for their friends' success (63%) than were buddies (52%), and were more likely to indicate that they helped at least somewhat (94% vs. 71%). Finally, a higher portion of respondents said they spent at least some time helping their friend (76%) as opposed to their buddy (56%). The mean differences on all of these items were significant ($p < .01$).

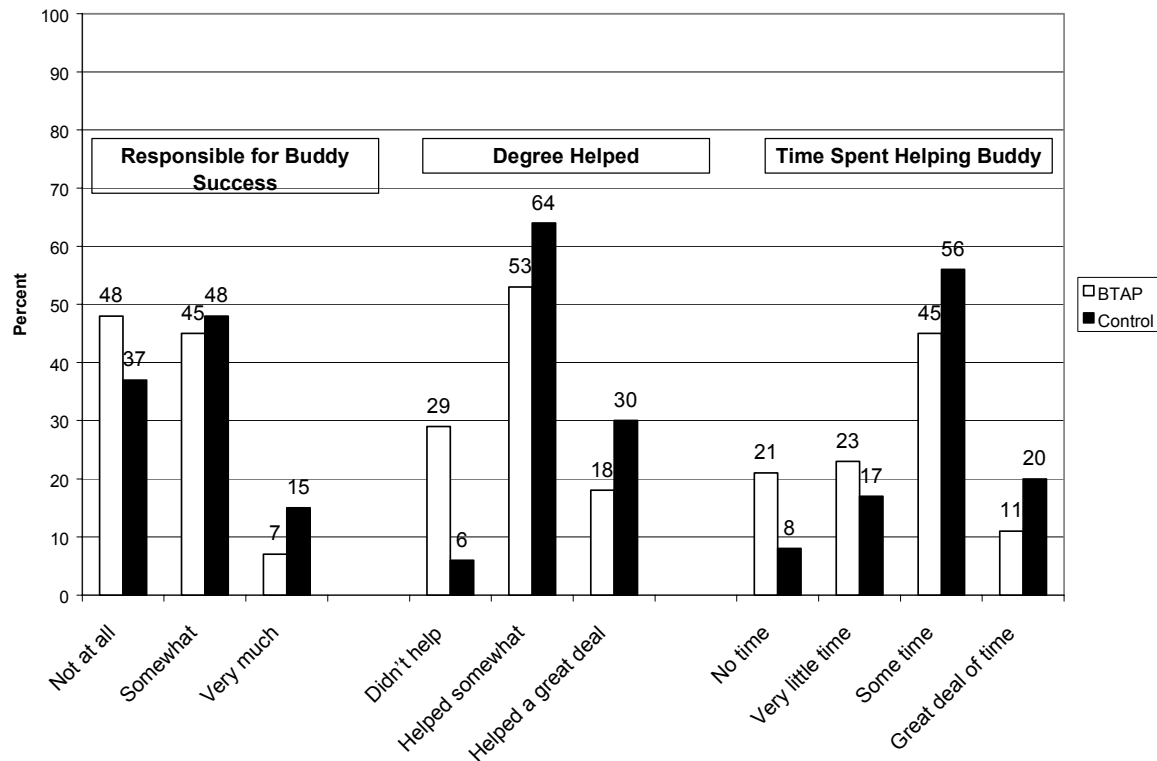


Figure 16. Ratings of impact on buddy (BTAP) or friend (control) and time spent helping.

Table 9 shows the dimensions on which the mean ratings of buddies and friends were significantly different ($p < .01$). Of the 14 domains on which ratings were requested, mean differences were found on 6, with friend ratings being higher in all cases. Again, this is to be expected to some degree in that buddies were assigned and friends chose one another. In fact, when the BTAP portion of the sample was restricted to respondents who said they *liked* their buddy, there were no significant differences in these ratings.

Table 9
Mean Ratings of Buddy/Friend*

Dimension	Average BTAP Rating	Average Control Rating
Confidence as a soldier	3.67	4.00
Job performance	3.67	4.10
Ability to meet performance standards	3.71	4.14
Ability to meet standards of conduct	3.66	4.00
Ability to deal with medical problems	3.61	3.97
Ability to deal with personal problems	3.37	3.74

*Items with significant BTAP-Control differences ($p < .01$)

Finally, as shown in Table 10, significant differences were found between BTAP participants and controls on 5 of the 14 dimensions on which they were asked to rate the influence their buddy/friend had on them. In all cases, the mean ratings fell between no influence and positive influence, with the friend ratings being higher. When the BTAP sample is restricted to those who said they liked their buddy, the only significant differences in impact were in meeting performance standards and adjusting to the unit, both of which favored “friends” over “buddies.”

Table 10
Mean Ratings of Buddy/Friend Influence*

Dimension	Average BTAP Rating	Average Control Rating
Confidence	3.50	3.75
Adapt to Army	3.28	3.52
Ability to meet performance standards	3.38	3.67
Ability to meet standards of conduct	3.34	3.56
Ability to adjust to unit	3.33	3.67

*Items with significant BTAP-Control differences ($p < .01$)

Buddy/friend ratings and assessments of their influence were uniformly influenced by degree of liking. This is demonstrated in Figure 17, which shows the overall mean influence ratings as a function of feelings about one’s buddy/friend. In every case, the most positive mean ratings were for soldiers who were liked and the least positive for those who were disliked.

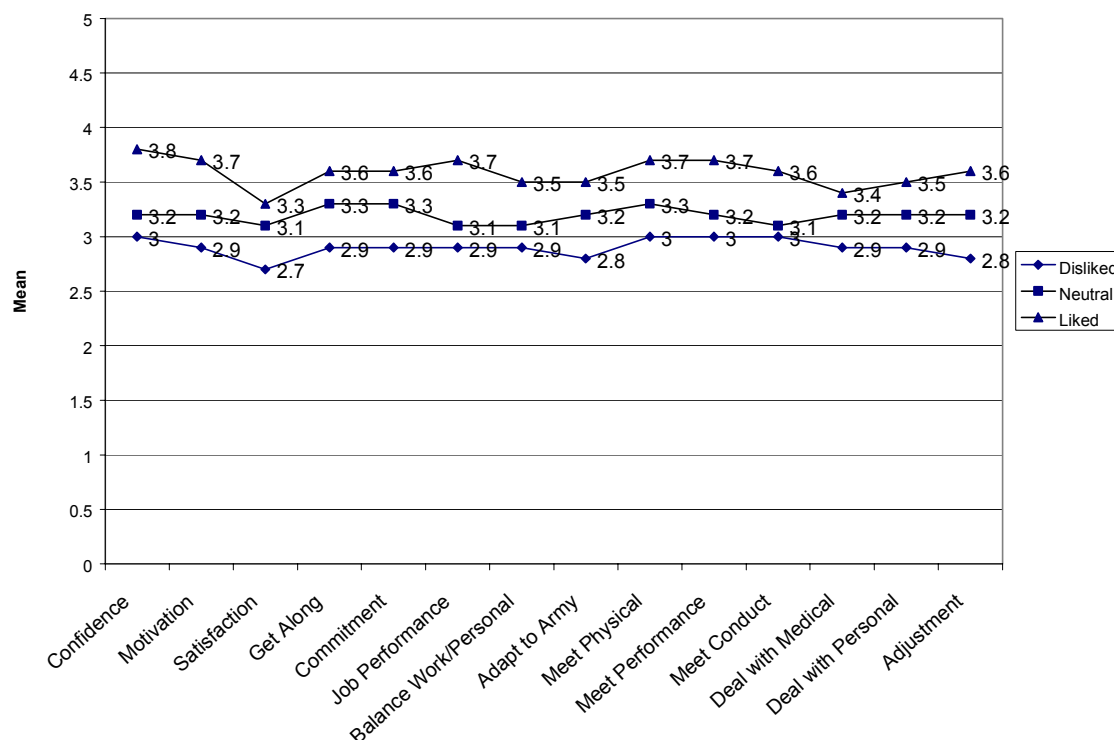


Figure 17. Ratings of buddy/friend influence by liking for buddy/friend.

Soldiers' Opinions About BTAP

Soldiers in the control group were asked if having their OSUT battle buddy assigned with them would have been useful. BTAP soldiers were asked to indicate their level of agreement with the program based on their experience. As shown in Figure 18, there was a distinct difference between the two groups on this evaluation. Nearly twice the percentage of those in the program expressed positive feelings about it as compared to the controls. This was further borne out by content analysis of the open-ended responses soldiers offered. In all, 78% of the self-designated BTAP and 67% of the control soldiers provided written responses. These are summarized in Table 11. Complete comments are presented in Appendix B.

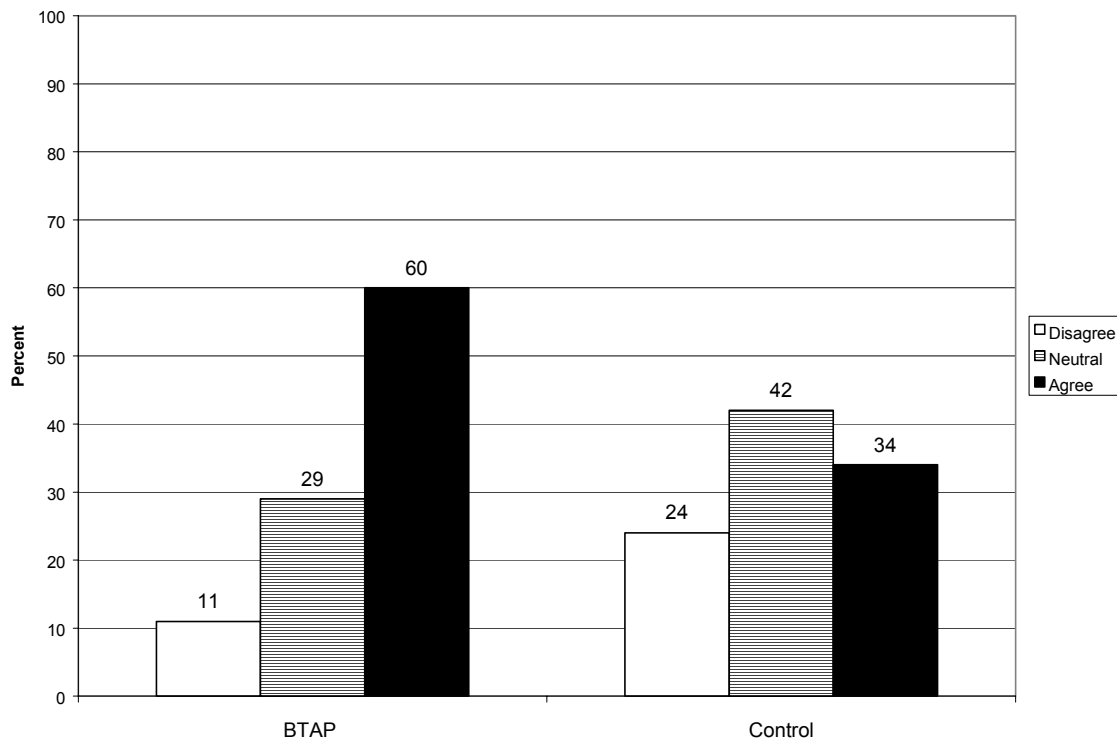


Figure 18. Evaluation of BTAP by self-designated BTAP and control soldiers.

Table 11
Summary of Written Statements Regarding BTAP

Positive	BTAP		Control Group	
	Number	Percent	Number	Percent
Eases transition	49	42	32	21
Develop friendship/ Motivate one another	19	16	31	21
Negative				
Problems with conflicting personalities	9	8	30	20
Problems with location/ desired work	13	11	7	5
Neutral/Equivocal				
Depends on buddies	7	6	6	4
Undecided, don't know/care	6	5	12	8
Miscellaneous	15	13	31	21

Soldiers in the program were more likely to offer a supporting comment (58% of comments versus 42%), while those in the control group were somewhat more likely to point out potential problems (25% of comments versus 19%). The primary positive points made concerned the potential for easing the transition to the unit and the value of friendship and support.

It's good to have someone you know and trust with you. I trust my battle buddy more than most soldiers at this post. He is always there for me. And I am there for him.

I agree because it is good for someone to have someone else to know when you are going somewhere you know nothing about. It is also good to have a buddy there to talk to or to ask for help if you may need it.

On the flip side, the major problems cited were with buddies who do not get along and the difficulties associated with buddies who want to go to different locations or pursue different career paths.

I feel it would not have been useful at all for the reason that I could not stand my battle buddy from OSUT training. I would have been more stressed out than I am now.

I disagree...for the reason that I have had opportunities such as sniper school, different job opportunities that I could not have because of the system. Because the system states that for the first year of your station you have to stay together job-wise. I really would have liked to attend the school and try new things in my job.

BTAP and Outcomes

As a first step in examining the relationship between participation and BTAP and outcomes, comparisons were carried out between self-designated buddies and controls as well as actual teams and controls on the following:

- morale
- job stress
- personal stress
- career intentions
- evaluation of the decision to enlist
- evaluation of BTAP

Significant differences were found between the BTAP groups and the controls on only one variable: whether they thought assigning battle buddies together to their first unit was a good idea. A majority of soldiers in the program agreed with this idea, while only about one-third of the control subjects thought this was a good idea (see Figure 15).

As with the training survey, regression analyses were conducted in an attempt to determine which variables best predicted relevant outcomes. Given that the central interest in creating BTAP was to have an impact on attrition, we first requested that the Social Security Numbers of the soldiers responding to the field survey be matched against the latest available update of the Enlisted Master File (EMF) and that relevant data be extracted (e.g., AFQT, education, separation status). This enabled us to determine which of the respondents had left the Army between the time they completed the survey and the last EMF update, which took place in December 2001. From a research perspective, the outcomes of this process were not fruitful, in that we found only 5 control soldiers, 4 self-designated BTAP soldiers, and 4 soldiers who were in the program according to records but said they were not assigned with their buddy, had departed the Army in that interval. This number was too small to do any meaningful analyses. We were able, however, to extract additional information on soldiers such as their AFQT scores and their education level. As discussed below, these were included in the analyses along with other background information.¹

The process for conducting the regression analyses was similar to that used for the training survey, with one notable exception. Because the number of cases available was significantly smaller, there was a need to reduce the number of variables entered into the analyses. To accomplish this and still take advantage of all of the information collected, we conducted a series of factor analyses. Basically, this technique determines which

¹ As mentioned, the original records we received from the Army contained names and SSNs for 428 BTAP and 390 control soldiers. We considered the possibility of performing the EMF match using this file, allowing us to obtain attrition data for all of these soldiers, whether or not we had a completed survey from them. However, the finding that 40% of survey respondents who were designated in the original file as BTAP participants said they were not assigned with their battle buddy led us to reconsider this option. The apparent inaccuracy of the BTAP designation in these records would severely compromise any analyses of attrition rates based on it.

variables are closely related, and therefore tap the same or similar dimensions. For instance, when self-ratings were subjected to factor analyses, we found that 10 of the 14 domains were highly related. Thus, if a soldier rated himself highly on confidence, he was also likely to rate himself the same way on motivation, ability to get along with others, commitment to completing term, job performance, and so on. Based on these results, scores were computed by taking the average of the items that made up each of the dimensions. These were:

- Self ratings. Confidence, motivation, ability to get along with others, commitment, job performance, ability to balance work and personal life, ability to adapt to Army lifestyle, ability to meet performance standards, ability to meet standards of conduct, adjustment to company.
- Buddy ratings. Confidence, motivation, ability to get along with others, commitment, job performance, ability to balance work and personal life, ability to adapt to Army lifestyle, ability to meet physical standards, ability to meet performance standards, ability to meet standards of conduct, ability to deal with medical problems, ability to deal with personal problems, adjustment to company.
- Buddy effect on respondent. All items.
- Leader/unit items. Easy to go to leaders, leaders help soldiers stay, leaders treat soldiers with respect, impressed with quality of leaders, leaders set high standards, leaders interested in soldier welfare, great personal feelings for unit, leaders care about well being, soldiers help with personal problems, company can get job done, company works as a team, get along well with other soldiers, if someone fails it's everyone's responsibility, morale is high, well prepared for deployment.
- Alienation. Leaders force soldiers out who can't perform, no strong sense of belonging to unit.
- Complete term. Disappoint others if I drop out, disappoint self if drop out.

Detailed factor analysis results are provided in Appendix C. Items that did not load on a factor, or that loaded equally on multiple factors, were entered into the analyses individually.

The steps taken to reduce the number of variables included in the analyses necessitated our deviating from the model shown in Figure 1 somewhat in conducting the regressions. Thus, the variables were entered in blocks, as follows:

- Personal variables. Marital/Dating status, number of dependents, wife/girlfriend supportiveness of completing term, other family supportiveness of completing term.
- Background variables. Average self rating, AFQT score, highest level of education, need for affiliation, hardiness, satisfaction with the Army, ability to meet physical standards, ability to deal with medical problems, ability to deal with personal/family problems.

- Buddy variables. Number of weeks served together, average interaction, general interaction, satisfaction with interaction, liking for buddy, mean buddy rating, rating of buddy satisfaction with the Army, mean rating of buddy influence.
- Leader items. Leader/unit ratings, alienation, complete term, do things outside of work with fellow soldiers, disappoint buddy/friend if drop out, company looks down on soldiers who drop out.
- Buddy/control. Self-designated BTAP or control.

The initial analyses were conducted using all the predictors. Secondary regressions were then carried out that included only the variables that were significantly related to a given outcome. Note that, because the number of such variables was generally small, the criterion for determining significance was lowered ($p < .05$) from that used in the end-of-training regressions. The results of this process are shown in Table 12.

As was the case for the training survey, the variables included in the regression were best able to predict morale (53% of the variance accounted for). In only one instance did BTAP/control status emerge as a significant predictor, which was the evaluation of whether assigning battle buddies to their first unit together is a good idea (or would have been useful to control subjects). As might be expected, liking for one's buddy was also a significant predictor in this case. Overall, the results suggest that the factors most related to positive outcomes (e.g., morale, positive evaluation of the decision to enlist, longer career intentions) are ratings of one's own abilities and satisfaction with the Army.

Table 12
Regression Results—Unit Survey

Outcome Variable = Morale, R-square = .528	
Item	Standardized Beta
Mean self rating	.296
Satisfaction with the Army	.233
Mean unit/leader rating	.209
Pay grade	.141
Average interaction with buddy	.117
Outcome Variable = Job Stress, R-square = .082	
Ability to deal with personal/family problems	-.266
Girlfriend/Spouse supports completing term	.119
Outcome Variable = Personal Stress, R-square = .078	
None	None
Outcome Variable = Feeling About Decision to Enlist, R-square = .351	
Satisfaction with the Army	.308
Mean self rating	.249
Hardiness	.150
Outcome Variable = Career Intent, R-square = .249	
Mean self rating	.335
Satisfaction with the Army	.298
Ability to deal with personal/family problems	-.251
Outcome Variable = Evaluation of BTAP, R-square = .078	
Self-designated BTAP or Control	.241
Liked your buddy	.154
AFQT score	-.142

Modeling Buddy/Friend Effects

To further clarify the relationships between the various buddy/friend elements, a simple model was developed and tested using structural linear modeling, a technique in which the hypothesized causal relationships among a set of variables are examined. The initial model tested is shown in Figure 19. Note that information on level of assignment was not collected from soldiers in the control group and therefore was not included in the model when data from the entire sample were used.

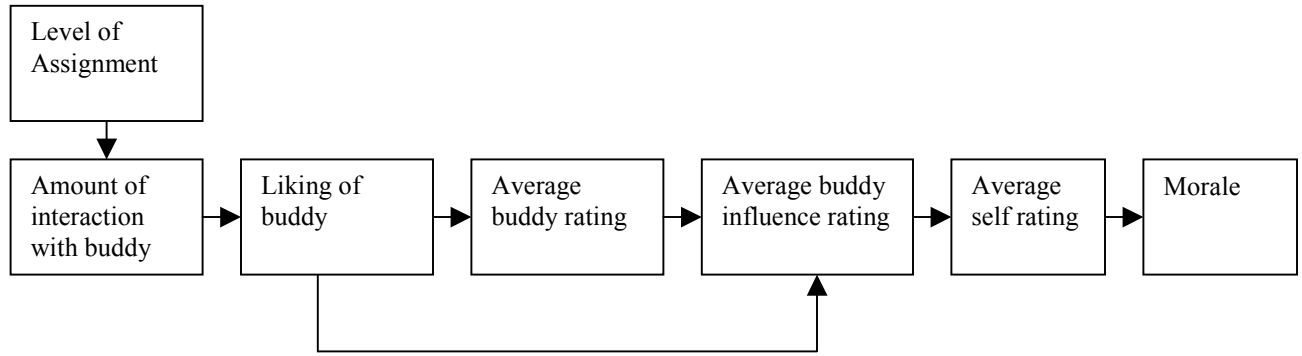


Figure 19. Initial Model of Buddy/Friend Effects

A second, similar model was also tested with career intentions as the outcome variable. In both cases, strong relationships were found between the elements of the model, however the overall “fit” was not good. The resulting statistics suggested this situation would improve if several other branches were included in the models. Branches were included only if they could be justified on theoretical grounds and/or were supported by the previous data analysis results. Table 13 provides the fit statistics for each of the models tested. Several guidelines were used in interpreting these results (R. A. McCloy, personal communication, August 14, 2002; Brown & Cudeck, 1993; Steiger, 1990; Steiger & Lind, 1980):

- the chi-square values should be non-significant
- the root mean square error of approximation (RMSEA) should be .08 or less, with .05 or less indicating a close fit
- the root mean square residual (RMR) should be .05 or less for close-fitting models.

Table 13
Model Fit Statistics

		Fit Statistics			
Sample	Model	Chi-square	df	RMSEA	RMR
Total Sample	1	37.71	9	0.14	0.09
(<i>n</i> = 201)	1+	15.21 (ns)	7	0.08	0.05
	2	27.69	9	0.10	0.07
	2+	11.84 (ns)	8	0.05	0.05
BTAP Sample	1	29.54	14	0.12	0.09
(<i>n</i> = 76)	1+	15.82 (ns)	12	0.07	0.06
	2	21.55	14	0.09	0.09
	2+	21.20	13	0.09	0.09
	2*	15.66 (ns)	12	0.06	0.07

With these guidelines in mind, it is clear that, as stated earlier, the simple models do not represent the data well. However the enhanced models conform quite well to the fit statistics guidelines. These models are presented with the path coefficients in Figures 20 through 23. Table 14 provides a summary of the major effects as seen in the figures.

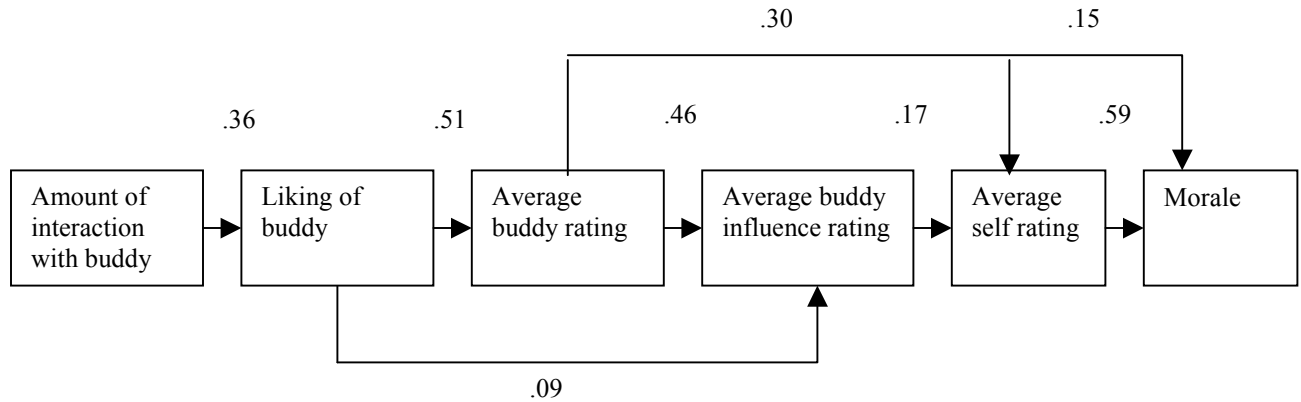


Figure 20. Enhanced Model 1 (Morale), Entire Sample

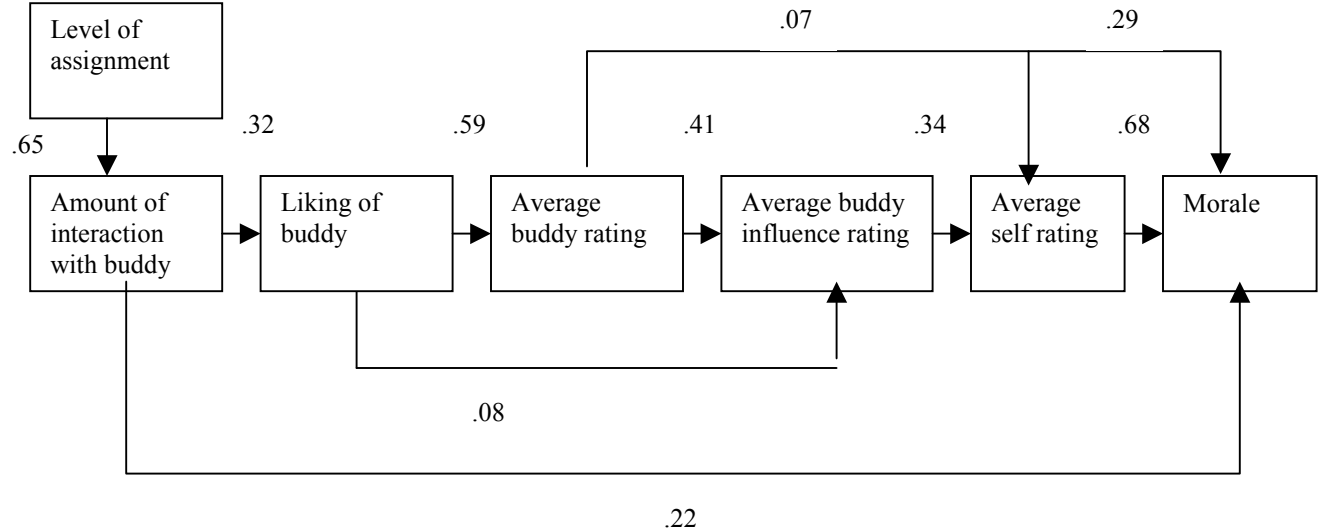


Figure 21. Enhanced Model 1 (Morale), BTAP

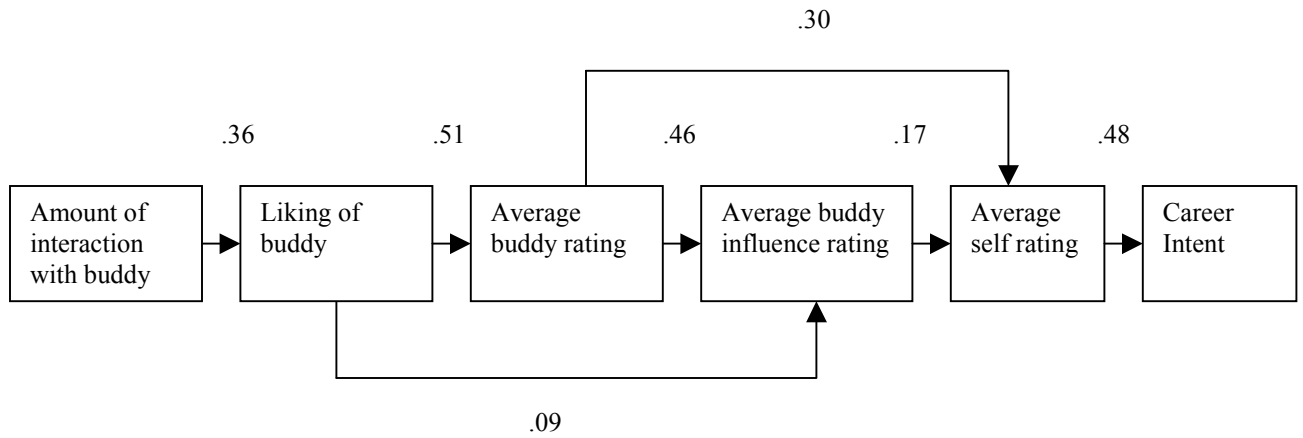


Figure 22. Enhanced Model 2 (Career Intent), Entire Sample

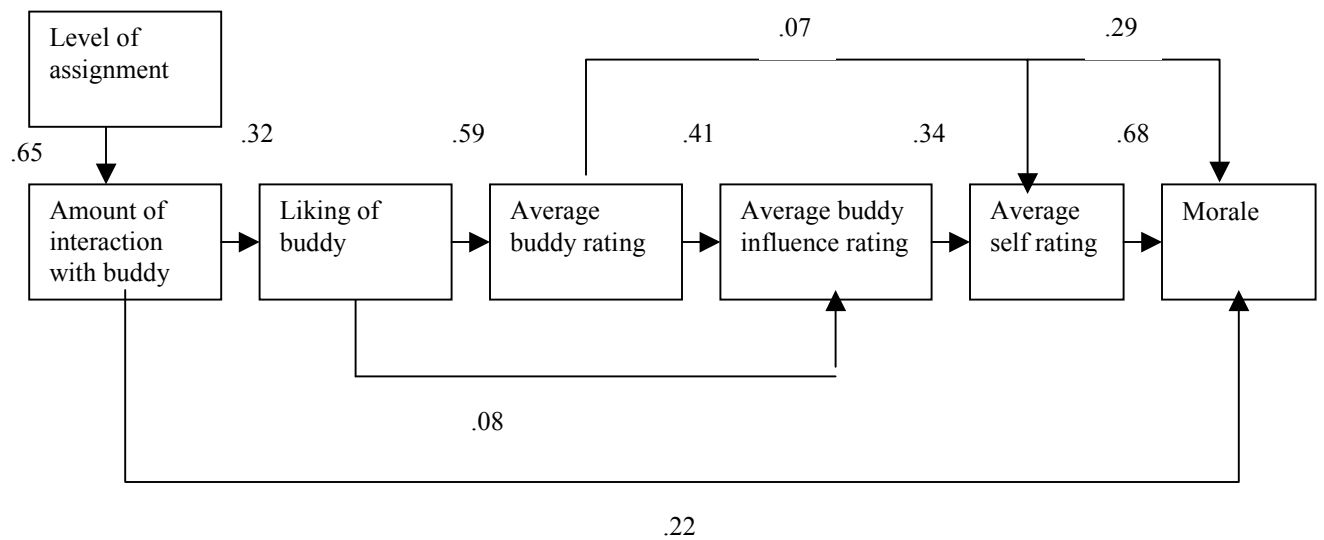


Figure 23. Enhanced Model 2 (Career Intent), BTAP

Table 14
Summary of Direct Effects Seen in Models

Direct Effects	Model			
	1+ all	2+ all	1+ BTAP	2* BTAP
Level of assignment – interaction	n/a	n/a	.65	.65
Interaction – liking	.36	.36	.32	.32
Liking – buddy rating	.51	.51	.59	.59
Buddy rating – buddy influence	.46	.46	.41	.41
Buddy rating – self rating	.30	.30	--	--
Buddy influence – self rating	--	--	.34	.34
Interaction – career intent	n/a	n/a	n/a	.22
Self rating – morale	.59	n/a	.68	n/a
Buddy rating – morale	--	n/a	.29	n/a
Self rating – career intent	n/a	.48	n/a	.55

Model 1 outcome variable = morale

Model 2 outcome variable = career intent

-- indicates weak relationship

n/a indicates relationship not tested

As indicated by the data in Table 14, the strongest effects found were:

- Level of assignment on amount of interaction (for BTAP only)
- Average self rating on morale
- Liking of buddy/friend on average rating of buddy/friend
- Average self rating on career intent
- Average rating of buddy/friend on average assessment of his influence

Other, less strong effects included:

- Amount of interaction with buddy/friend on liking
- Average assessment of buddy influence on self rating (entire sample)
- Average rating of buddy/friend on morale
- Average assessment of buddy influence on self rating (BTAP)
- Amount of interaction with career intent

Finally, when the total effects are examined (the direct influence of variables on one another without the intervening variables suggested in the model), there are consistent, reasonably strong relationships found between liking of buddy/friend and buddy/friend influence (.32), and rating of buddy/friend and morale (.33 to .38). These relationships may imply causality between positive assessments of buddies / friends and the degree of influence they have, however, the design of this study could not directly address causality.

These results affirm those seen earlier in regard to the importance of level of assignment in determining the amount of interaction between soldiers. They also highlight the critical role that liking ones buddy/friend plays in the evaluation of him, which, in turn, relates to the degree of perceived influence he has. Among the BTAP portion of the

sample, this influence then has an impact on their self-ratings. Finally, these self-ratings have a strong impact on both morale and career intent.

DISCUSSION

Battle Buddies

The evidence resulting from the training survey indicates that the battle buddy program is functioning well and is appreciated by soldiers. Among the findings that support this statement are the following:

- 85% of respondents said they were at least somewhat responsible for their battle buddy's success.
- 94% of respondents said they helped their battle buddy somewhat or a great deal.
- Over half of the respondents indicated that their battle buddy had a positive effect on them in terms of each of 14 factors included in the survey (e.g., confidence, morale, commitment).
- There was a positive, significant relationship between liking one's battle buddy and self-rated morale.

One possible exception to the overall good news in regard to the OSUT battle buddy program is the indication of a certain lack of stability in the battle buddy pairs, with 46% of respondents indicating they had more than one buddy over the course of training. The reasons for this are not evident from the survey, but one possible cause is obviously attrition. There was no indication in the data that having multiple buddies had an impact on the degree to which they were liked; however, it seems logical that the more stable the pairings the more opportunity there is for feelings of mutual respect and trust to develop.

It is also clear from the training survey results that an important component of successful battle buddy pairs is their liking for one another. For instance, there was a clear relationship between the degree of liking for one's battle buddy and the amount of time spent with him. In addition, battle buddies who were liked received higher ratings than those whom soldiers felt neutral about or disliked. Unfortunately, causality cannot be determined from these data. It is not clear, for instance, whether battle buddies develop positive feelings for one another based in part on their perceptions of one another's motivation, commitment, and so forth, or if they get to know and like one another and this influences their views of one another's qualities. In all likelihood, both processes were at work.

The major reason given for opposing assigning battle buddies together to their first unit was the difficulty involved if the two soldiers dislike one another. Given the strong relationship between liking and other factors (e.g., morale, assessment of BTAP, how they evaluated their buddy), it seems wise not to maintain battle buddy teams when there are negative feelings—either one-sided or mutual—between them. Fortunately, this problem occurs in a relatively small proportion of buddy teams; 81% of OSUT respondents said they liked their battle buddy to at least some degree and only 9% disliked him.

There is no evidence that assigning soldiers who don't get along to the same unit has *detrimental* effects. Rather, it seems that in these cases, the soldiers simply choose not to interact, therefore preventing any positive effects that might result from their association. Therefore, making BTAP program participation mandatory is unlikely to cause any harm due to personality conflicts, acknowledging that in a small proportion of cases, the program's intended effects will not be realized. Furthermore, this option might be easier to administer, because allowing battle buddies to decide whether they want to be assigned together could result in disagreements (e.g., one battle buddy does and the other doesn't).

BTAP

Our attempts to verify the BTAP status of survey respondents led to some rather surprising results. These included the fact that only 60% of those who had been designated as program participants in U.S. Army Personnel records said they had been assigned to their unit with their OSUT battle buddy. Perhaps even more surprising was that of the 60 buddy teams that we were able to identify, only 25 pairs both agreed that they had been so assigned. In a similar number of pairs (23), one soldier indicated that he did go to his unit with his buddy while the buddy said this was not the case. There are several possible explanations for these results:

- Soldiers were assigned with their buddy, but not informed that this was the case.
- Soldiers were assigned with their buddy, but had moved to another unit by the time the survey was administered so when asked if their battle buddy had been "assigned to this post," properly indicated "no."
- Soldiers were mistakenly identified as being program participants in the records used to classify them as BTAP or control.

Whatever the explanation, it seems apparent that there was some confusion regarding BTAP during its early stages. Several steps have been taken to correct this situation, including the development of assignment and tracking software to better manage and monitor buddy teams.

Another result that may be due to BTAP's start-up status at the time of the evaluation was the failure in many cases to assign soldiers together to the lowest unit level possible. Approximately half of the respondents said that they were assigned at the company or battalion level. Evidence strongly suggests that this has a major impact on the level of interaction between the soldiers; while 81% of those assigned to the same squad or platoon said they interacted with their buddy once or twice a day or more, only 35% of those assigned to the same company or battalion responded in this manner. There was also a clear relationship between the amount of interaction and the degree of satisfaction with it; those who interacted more expressed higher levels of satisfaction.

These results highlight the importance of level of assignment if the goals of BTAP are to be realized. Thus, as the program continues, every effort should be made to ensure that

paired soldiers are placed in such a manner that they will continue to interact on a frequent basis and provide the intended support and assistance.

The unit survey data suggest that buddies have significantly less impact in this environment than was true in training. This is evidenced by the fact that 85% of the OSUT soldiers said they were somewhat or very responsible for their buddy's success as compared to 52% of those in the field. Further, 94% of soldiers in training said they helped their buddy somewhat or very much, while only 71% of those in the field responded in this manner. Finally, when asked to assess the impact their buddy had on them on a variety of dimensions, an average of 60% of soldiers in training said positive or very positive compared to 35% of unit soldiers who responded this way. The reason for this decline is not evident from the survey data, however, two factors undoubtedly play a role. First, respondents interacted with their buddies less once they were in the field (i.e., 78% of OSUT soldiers reported interacting several times a day as compared to less than 50% of unit soldiers). This decreased level of interaction leaves less opportunity to have an impact. Further, it seems likely that the level of support required in training may be higher. Meeting the physical and other challenges and adapting to a completely new way of life likely involve more effort and stress than making the transition to an operational unit.

Having noted the differences between the training and operational environments in terms of buddy influence, it is also worth noting that more than half of the respondents said they helped their buddy and one-quarter to one-half indicated that their buddy had a positive impact on them regarding the various dimensions included in the survey. When these results are compared to those found for soldiers in the control group (who responded in terms of their closest friend in their unit), they generally come up somewhat short. That is, a higher percentage of the control group indicated that they were responsible for their friends' success, helped their friends, and spent at least some time doing so. In addition, there were significant differences in the ratings of buddy/friend influence on five dimensions, all favoring the control group.

There are several possible explanations for the differences found between the BTAP and control groups. For one, interaction is a prerequisite for friendship formation. Therefore, it is highly likely that the soldiers referred to by members of the control group were uniformly assigned at a closer level (e.g., squad, platoon) than were the BTAP respondents. This is supported by the data on frequency of interaction; 76% of control soldiers reported interacting once or twice a day or more as compared to 52% of those in BTAP. Thus, taken as a whole, there was greater opportunity for friends to have an impact than there was for buddies. Another factor that may have played a role is the higher degree of liking expressed by members of the control group. This also is to be expected, in that it seems unlikely that a respondent would pick someone he didn't like as the "soldier who has been your closest friend." BTAP buddies, on the other hand, were assigned, thereby increasing the likelihood that they may not get along. It is worth noting again, however, that only 14% of the BTAP participants said they did not like their buddy. Finally, the importance of liking of buddy/friend in terms of several of the other outcomes (e.g., morale), suggests that this may be something for leadership to attend to in monitoring those under them. That is, soldiers who have apparently not established a

connection with someone else in the unit may be candidates for counseling to determine why this may be the case and to provide advice in the area of social skills and “fitting in.” To the extent that such advice leads a soldier to establish friendships within the unit, it may increase morale and decrease the likelihood of attrition.

Finally, the models of buddy/friend effects both reaffirmed and illuminated the earlier findings. It was clear that level of assignment had a direct and strong effect on the amount of interaction between the soldiers. Also clear was the impact of liking one’s buddy/friend on how he was evaluated. The models go on to suggest that buddies and friends who are liked more, and therefore evaluated more highly, are also seen as having a more positive influence, and that this can have a positive effect on one’s self evaluations. Self evaluations were, in turn, found to have a strong positive effect on morale and career intent. Therefore, one possible explanation of the impact of buddies and friends is that they can strengthen each others’ views of themselves as soldiers, which then positively affects morale and intentions to continue serving in the Army.

Final Recommendations

The results of the survey and discussions held with various officials associated with BTAP led to the following recommendations regarding battle buddies and BTAP:

- Given the apparent instability of buddy teams in OSUT, it may be worthwhile to determine the cause of this phenomenon and possible solutions. Having a longer period to get to know one another and develop a sense of trust would likely result in stronger, more effective buddy teams.
- Because the degree to which buddies liked one another had a strong positive impact on their level of interaction and impact, it may be worth the effort to use some screening measures (e.g., interests, likes/dislikes) to match battle buddy pairs. As noted, a relatively small number of soldiers reported not liking their battle buddy. However, it must be acknowledged that despite attempts to match soldiers based on interests and other characteristics, it is likely that some pairs still won’t get along.
- In implementing the program, an emphasis should be placed on ensuring that buddies are assigned to the smallest unit level possible (i.e., squad, platoon). Assignment level has a major impact on the amount of interaction between the soldiers, which in turn dictates the degree of assistance they can provide one another.
- Continue efforts to improve the administrative functioning of the program, including investigating means by which those included in it can also be able to pursue training and assignment options that will further their careers and maintain their motivation.
- Ensure that soldiers who are in the program are aware of that fact and they understand the reasoning behind BTAP (i.e., they are being assigned with their battle buddies so they can provide support and encouragement beyond the training environment).

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